REPORT RESUMES

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EDUCATIONAL PROGRAMS AVAILABLE TO BLIND OR PARTIALLY BLIND CHILDREN IN NEW YORK CITY ARE DESCRIBED IN THIS ILLUSTRATED BULLETIN. PROCEDURES FOR SCHOOL PLACEMENT, ORGANIZATION OF SPECIAL CLASSES, AND ENROLLMENT STATISTICS ARE DISCUSSED. THE RESOURCE CLASS PROGRAM AND GUIDELINES FOR BOTH REGULAR AND RESOURCE TEACHERS ARE PRESENTED. OTHER SPECIAL PROGRAMS (ITINERANT TEACHER PROGRAM, MULTIPLY HANDICAPPED BLIND CHILDREN, AND SPECIAL CLASS ORGANIZATION) ARE DISCUSSED. CURRICULUM ADAPTATIONS IN THE FOLLOWING AREAS ARE PROVIDED--LANGUAGE ARTS, SPEECH, TYPING, MATHEMATICS, SCIENCE, SOCIAL STUDIES, FOREIGN LANGUAGE, MUSIC, FINE ARTS, INDUSTRIAL ARTS, HOME ECONOMICS, AND HEALTH EDUCATION, ENRICHMENT AND CORRECTIVE EDUCATION PROGRAMS, TESTING EXTRACURRICULAR ACTIVITIES, TRIPS, EXCURSIONS, AND LEISURE TIME ACTIVITIES ARE ALSO DESCRIBED. THE ROLE AND RESPONSIBILITIES OF THE GUIDANCE AND SUPPLEMENTARY SERVICES, THE ADMINISTRATION, AND THE SUPERVISORY PERSONNEL ARE EXAMINED. TEACHING GUIDELINES AND INFORMATION ON BRAILLE, INSTRUCTIONAL AIDS, AND A GLOSSARY OF MEDICAL TERMS ARE INCLUDED. AN APPENDIX CONTAINS THE ANSWERS TO FREQUENTLY ASKED QUESTIONS, THE EYE REPORT FORM (NEW YORK CITY), A BIBLIOGRAPHY OF 50 ITEMS, AND REFERENCE LISTS OF AGENCIES AND SOURCES OF MATERIALS. THIS DOCUMENT WAS PUBLISHED BY THE BOARD OF EDUCATION OF THE CITY OF NEW YORK, 110 LIVINGSTON STREET, BROOKLYN, NEW YORK 11201, AND IS AVAILABLE FOR $2.00. (CG)

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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EDUCATING VISUALLY HANDICAPPED PUPILS

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Foreword

Recent innovations and discoveries as well as changes in ophthalmological theory have resulted in significant modifications in the education of visually handicapped pupils. If teachers are apprised of the latest philosophy, trends, and techniques, they will be able to plan more effectively for their implementation by revising classroom methods and incorporating the new concepts into all areas of the pupil's academic career. Another purpose of this bulletin is to give the entire school staff and other interested people an explanation of the current practices that have upgraded the educational program for the blind and partially sighted pupils attending our public schools. Emphasis is placed particularly upon the modernization of our expanded services and methods by which blind and visually limited children are able to participate in the total curriculum of the regular school program.

To meet the unique needs of these children, special materials and supportive services are provided to teachers and to schools through the Bureau for the Education of the Visually Handicapped and the Office of Special Education and Pupil Personnel Services. We hope that a knowledge of the program will be of value to people who are involved in the education of the visually handicapped.

Helene M. Lloyd
Acting Deputy Superintendent

January, 1967

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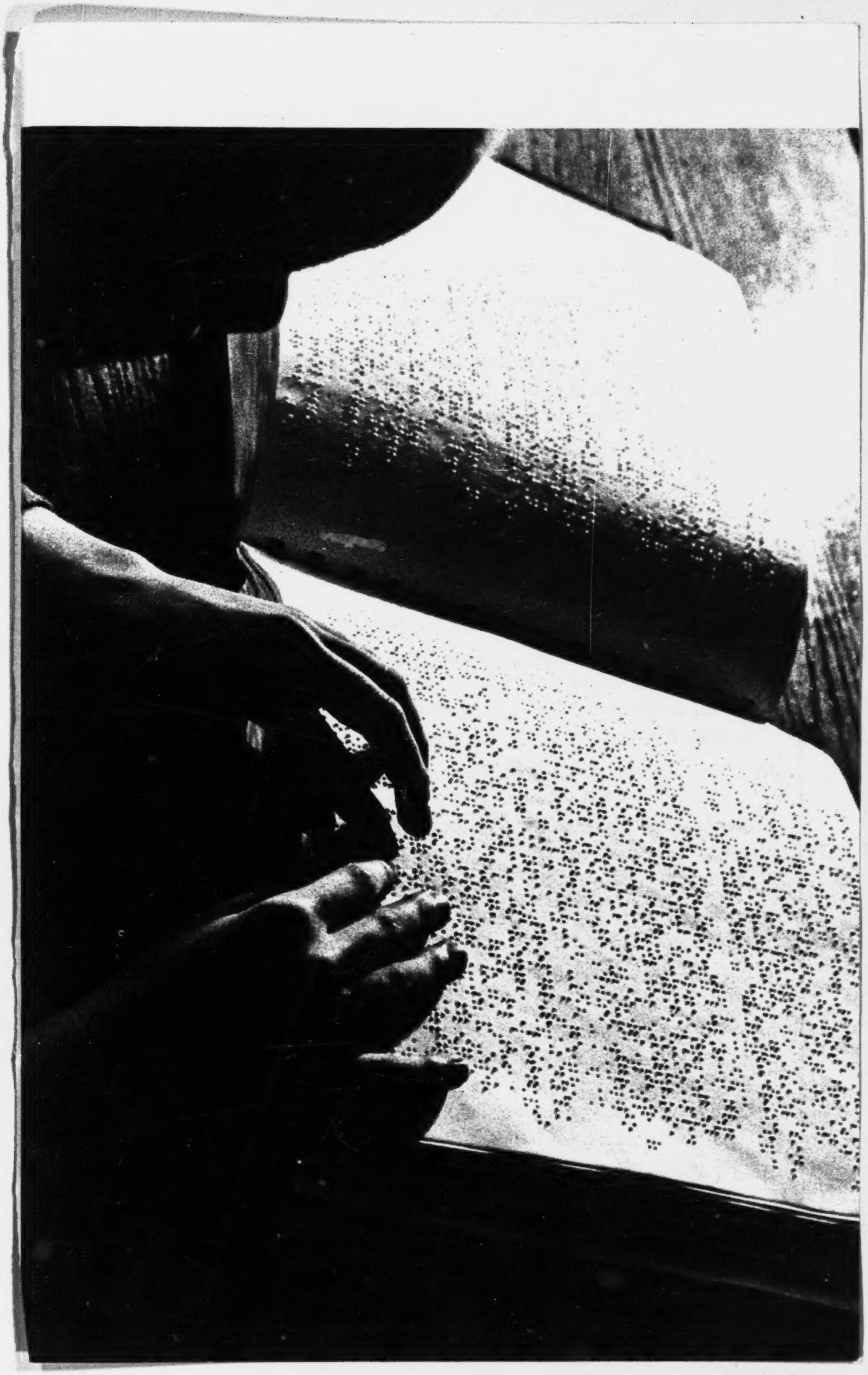


GLOSSARY

Bureau refers to the Bureau for the Education of the Visually Handicapped.

E12S or E12S Form is the official Department of Health eye-report form on which the eye specialist records his findings and recommendations.

Large Print is print whose characters range in size from 12 point type to 24 point type. Samples of such type may be found on the reverse side of the E12S Form. (See pp. 88-91.)

Nemeth Code is a special braille code for mathematics and science notations.

Regular Class is a class composed primarily of pupils who are considered to be non-handicapped; that is, they do not have any mental, physical, or emotional handicaps that would warrent placement in a special class.

Regular Teacher (regular classroom teacher and classroom teacher) refers to any classroom teacher whose principal function is to teach the curriculum or some part of it to pupils in a regular class. She is involved in the area of special education as she may have one or more visually handicapped children in her class.

Resource Room is a schoolroom where a specially trained teacher, using special educational equipment, instructs visually handicapped pupils. Her work in this room also includes brailling, enlarging, and recording needed materials; administering tests; providing facilities for readers and student aides.

Resource Teacher is a teacher who is specially licensed to instruct visually handicapped children and to serve as a consultant to persons working with these pupils; that is, regular teachers, administrators, supervisors, counselors, nurses, etc.

Special Class is a class specifically organized to instruct or to aid in the instruction of children whose mental, physical, and/or emotional handicaps are too severe to enable them to function satisfactorily in a regular class without special help. As distinguished from a resource class, the handicapped pupils are on the register of the special class.

Special Education refers to programs designed to meet the needs of atypical children.

I

Introduction

The Bureau for the Education of the Visually Handicapped, a bureau of the Office of Special Education and Pupil Personnel Services, provides programs for visually handicapped students in New York City public schools. These programs are offered in cases where the visual problem, after evaluation, is deemed to be a contributing factor which impedes school progress. The identification of those who are qualified as visually handicapped is specified in the descriptions of the programs which follow. This bulletin is designed to serve as a guide for those who are involved in the identification, referral, instruction, supervision, or guidance of visually handicapped students.

TYPES OF EDUCATIONAL PROGRAMS

To meet the varying needs of these visually handicapped children these five types of programs are available:

1. Resource Program for Visually Limited Children

The resource program for visually limited children serves those pupils whose vision enables them to use printed materials as the major medium of instruction, whose mobility is sufficient for regular class placement, who are not mentally retarded, and who do not possess additional handicaps which would require placement in other programs of special education. These students are assigned to resource teachers located in schools throughout the city, but are on the registers of regular classes. The resource teachers also keep a roster of the visually limited pupils who are in this resource program.

2. Resource Program for the Blind

The resource program for the blind serves those students whose vision is not sufficient to carry on the major part of their instruction with printed material, and must, therefore, use tactile and recorded material, and who require Braille instruction. Students in this program are not mentally retarded and possess sufficient mobility with which to participate in the regular school curriculum. They are on the registers of the regular classes. In addition, they are assigned to resource teachers who maintain a roster of the blind students assigned to the resource program.

3. Special Class Organization

A few classes for visually limited and blind children are organized as special classes rather than resource classes. This means that the teacher of the visually handicapped children maintains a register. These special classes function as modified self-contained units. The pupils in these classes spend most of the school day in the resource room under the guidance of the resource teacher who is responsible for teaching a major portion of the curriculum to these children. They take part in as many school activities as possible, including work with their grade in a regular class. The amount of time a pupil spends in the regular class depends on individual need.

4. Special Classes for the Multiple Handicapped Blind

These classes serve those blind students whose additional handicaps, such as mental retardation or emotional disturbance, preclude placement in the resource program for the blind. These students are placed in special classes. Their curriculum, program, and activities are designed to meet the special needs of the multiple handicapped blind. Auxiliary services are available through private agencies which provide the diagnostic, clinical, and supporting services which the individual child may need.

5. Itinerant Teacher Service

This service is provided for those cases approved by the consultant ophthalmologist of the Bureau for Handicapped Children for whom placement in some other program is indicated, or where it is physically unfeasible for the student to be in the aforementioned programs. An itinerant teacher is assigned to each case for consultative purposes, and/or for direct instruction. Enlarged materials, braille materials, and tangible apparatus is furnished as indicated. Itinerant teacher service may be provided to any public educational setting, but not in the home.

ORGANIZATION OF RESOURCE CLASSES

Resolutions adopted by the Board of Education (*Journal, Board of Education of the City of New York, 1963;* "Regular Meeting, January 23") explain the responsibilities of the resource teacher, as follows:

"The teacher of a Special Class may serve two functions, namely, that of the teacher of a class or that of the resource teacher of a class. As the teacher of a class her primary function is to provide for the health, personal, educational and social guidance of the children, to consult with teachers of regular classes to which her handicapped children are programmed, to determine the needs of the children, to make available needed instructional materials, to create special instructional materials and to provide tutorial and remedial services as indicated.

"On the elementary school level, teachers of special classes have the primary function of teaching the curriculum with the exception of teachers of classes of the blind and sight conservation classes.

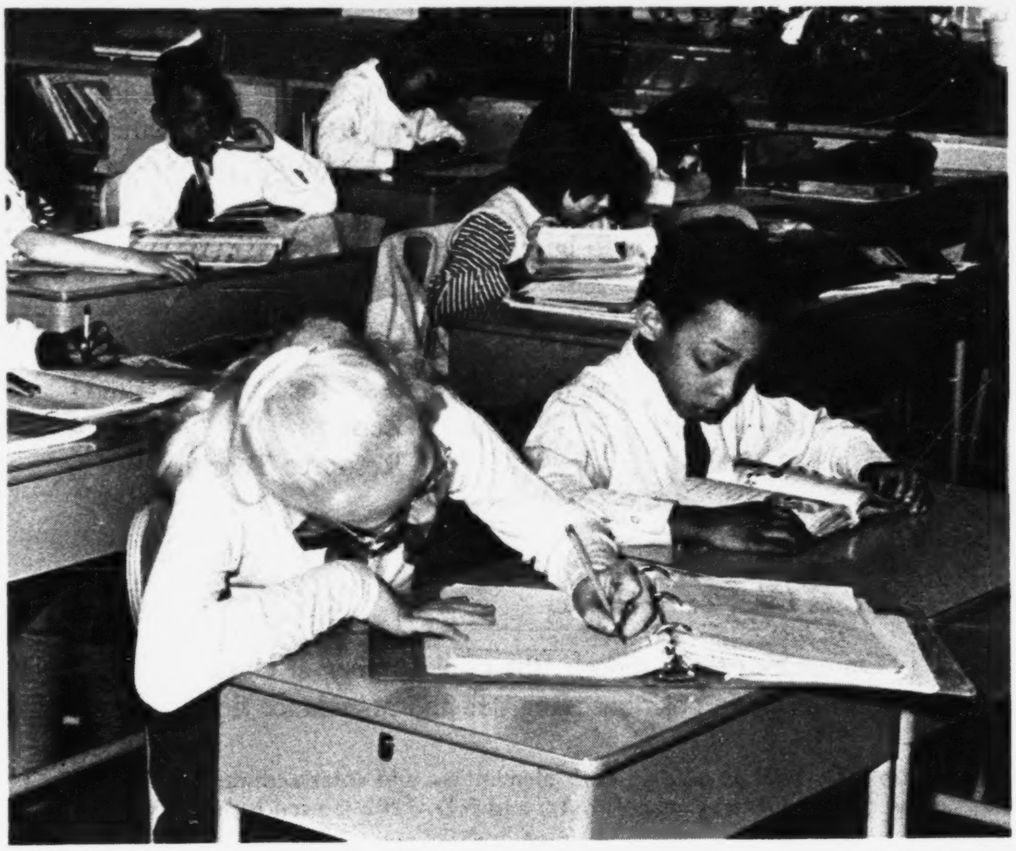
"On the secondary school level, teachers of special classes have the primary function of acting as resource teachers with the exception of teachers of classes for the mentally retarded, whose function it is to teach the curriculum which is essentially an elementary school curriculum".

In accordance with the above resolutions, resource classes for visually handicapped children (including those with limited vision as well as those who are blind) are set up in the New York City schools to provide full educational facilities for these students.

Visually handicapped pupils are placed on the registers of the regular class teachers in the school. The special teacher is designated as a resource teacher with no official register, although she does keep a roster of the blind or partially sighted pupils assigned to her.

Visually handicapped pupils follow the same curriculum as their classmates in the regular class, using special materials provided by the resource teacher. They are expected to meet the same standards as other children of comparable ability. The visually handicapped pupils go to the resource room from the regular classroom for tutorial and remedial services.

Visually limited primary school pupil at work in her regular class



The resource rooms are staffed by specially licensed teachers who provide remedial and tutorial services where indicated, make available needed instructional materials, give assistance to regular grade or subject teachers in meeting the learning needs of visually handicapped pupils, and provide for the general guidance of these pupils.

The visually limited pupil may need the help of optical aids, large print materials, recorded materials, or readers to function satisfactorily in his regular class. Since visual limitations vary greatly, the materials used will depend upon each child's ability to use them. The visually limited pupil is not restricted to the use of special materials.

The blind child will need to become skillful in the use of braille materials and techniques. He will need the knowledge of and skill in the use of the Braille Code of reading and writing and the Nemeth Code for mathematics. He will also need to attain an increasing degree of independent mobility for functioning in the regular class. In addition, the blind child will need to develop self-help skills as well as the ability to communicate with sighted children.

The resource teacher assists the entire school staff in understanding the nature and the needs of the visually handicapped children in the school.

To clarify the position of the resource class and the resource teacher in a school's organization and to explain the method of accounting for them in official reports and records, the Bureau of Educational Program Research and Statistics sends a letter of information to the principal of a school in which a resource class is to be established. The relevant portions of this letter state:

> "For purposes of accounting on the Period Report (S.D. 1001 and S.D. 1202*) the resource teacher (of the class for visually handicapped children in your school) is to be indicated as follows:
>
> *On the S.D. 1001:*
>
> | | |
> |---|---|
> | Column 1 — Number of Classes | 1 |
> | " 2 — Class Designation | V.L. (or Class for Blind) |
> | " 3 — | Zero |
> | " 4 — etc. | Resource Teacher |
>
> *On the S.D. 1202:*
>
> | | |
> |---|---|
> | Item 5, School Summary, Column Classes Line, Zero Register | 1 |
>
> "On each of these reports, the total number of classes will reflect the authorized teaching positions. Register and attendance figures for the visu-

---

*Form S.D. 1001 is used in both elementary and intermediate schools; S.D. 1102 is used in elementary schools only, and S.D. 1202 is used in intermediate schools.

ally limited (or blind) pupils will be included in the regular graded classes.

". . . each of the resource teachers will maintain a separate roll book to provide attendance data on these handicapped children should such statistics be subsequently required."

PROCEDURE FOR SCHOOL PLACEMENT

The Department of Health, through the consultant ophthalmologist of the Bureau for Handicapped Children, evaluates referrals of children for special services and recommends placement in one of our programs. The criterion used by the Bureau for Handicapped Children is visual acuity of 20/70 or worse in the better eye after the best possible correction has been obtained.

It is the Bureau for the Education of the Visually Handicapped, however, which determines which of the five programs may be best suited to meet the needs of the individual pupil.

Referral of a student for placement in one of the five programs is initiated by the completion of form E12S which is provided by the Department of Health. This eye examination report form is available in all public school medical offices and in the clinics and hospitals under the jurisdiction of the Department of Health. The most current E12S is forwarded to the Bureau for Handicapped Children of the Department of Health for review by their consultant ophthalmologist who may seek additional information from the examining doctor or optometrist. Consultation with personnel of the Bureau for the Education of the Visually Handicapped is initiated when the need arises.

The recommendation of the consultant ophthalmologist is recorded on the E12S which is then forwarded to the Bureau for the Education of the Visually Handicapped. The student is usually assigned to the nearest school having the program for which the child has been recommended. Where necessary, transportation is provided on a free door-to-door basis in accordance with the regulations of the Bureau of Pupil Transportation. An exception to this is the visually limited high school student, who uses public transportation. Notice of authorization of placement is sent to the parent, to the sending school, and to the receiving school. If, in the process of screening records and an interview with the parent and child, atypical qualities of personality are found, the child may be referred to an appropriate setting for further evaluation. When placement in a class for retarded blind children is deemed to be appropriate, records are collated and sent to the Bureau of Child Guidance for approval of placement. A prerequisite to placement is that the child must have mobility as well as a minimum of self-help skills.

When the evaluation by the agency or Bureau of Child Guidance indicates that the blind pupil is emotionally disturbed, the Bureau supervisor in charge of the multiple handicapped program screens the child and, through an interview with the parent, determines the willingness of the family to participate in and cooperate with the special program.

ENROLLMENT STATISTICS

In spite of the fact that the past few years have witnessed the development and extension of the program for multiply handicapped blind children, the total number of pupils enrolled in all classes for the blind during this same period has become more or less stabilized at figures below those prevailing during the preceding five-year period. The two major reasons are: cases of retrolental fibroplasia have been dwindling to the vanishing point; the use of low-vision aids has enabled some Braille students to read print. The latter situation is, of course, one of the reasons for the increase in the number of visually limited students enrolled in the Bureau's program. Another significant reason for such increase is the extension of the itinerant teaching service.

Explanation of the Graphs

The graphs which follow show:

1. *Enrollment in Classes for Visually Handicapped Children.* The number of pupils enrolled in programs for visually handicapped children is based on data obtained in September of the school year indicated so that the statistics under 1961 represent the figures for the school year 1961-1962, etc.

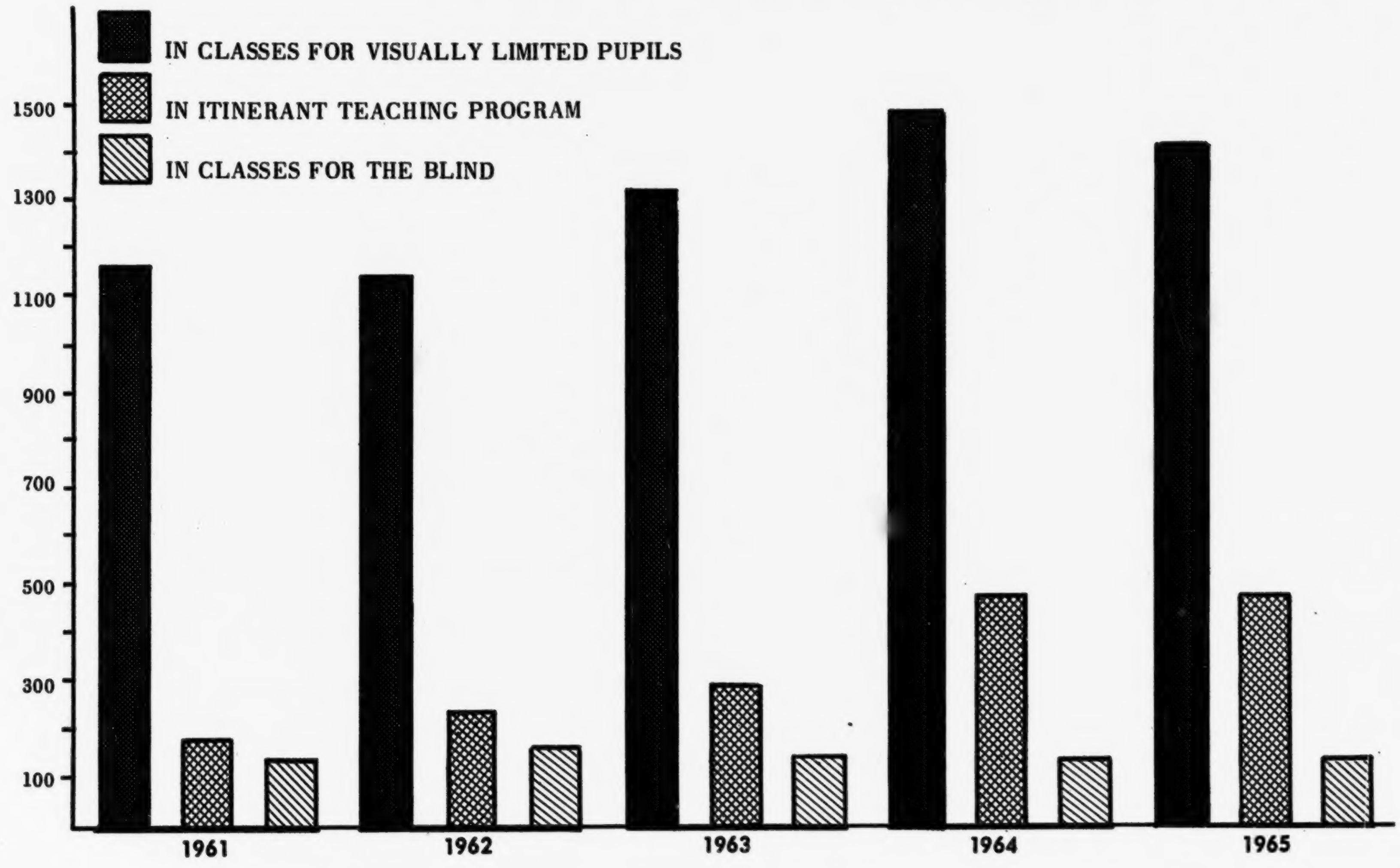
2. *Placement of Legally Blind Pupils.* The type of placement provided for legally blind children is based on data gathered in annual surveys for reports required by the New York State Department of Education. These surveys are prepared as of January 1st of the year indicated. Thus, the statistics under the year 1962 are for January 1st of that year, thereby putting it in the 1961-1962 school year.

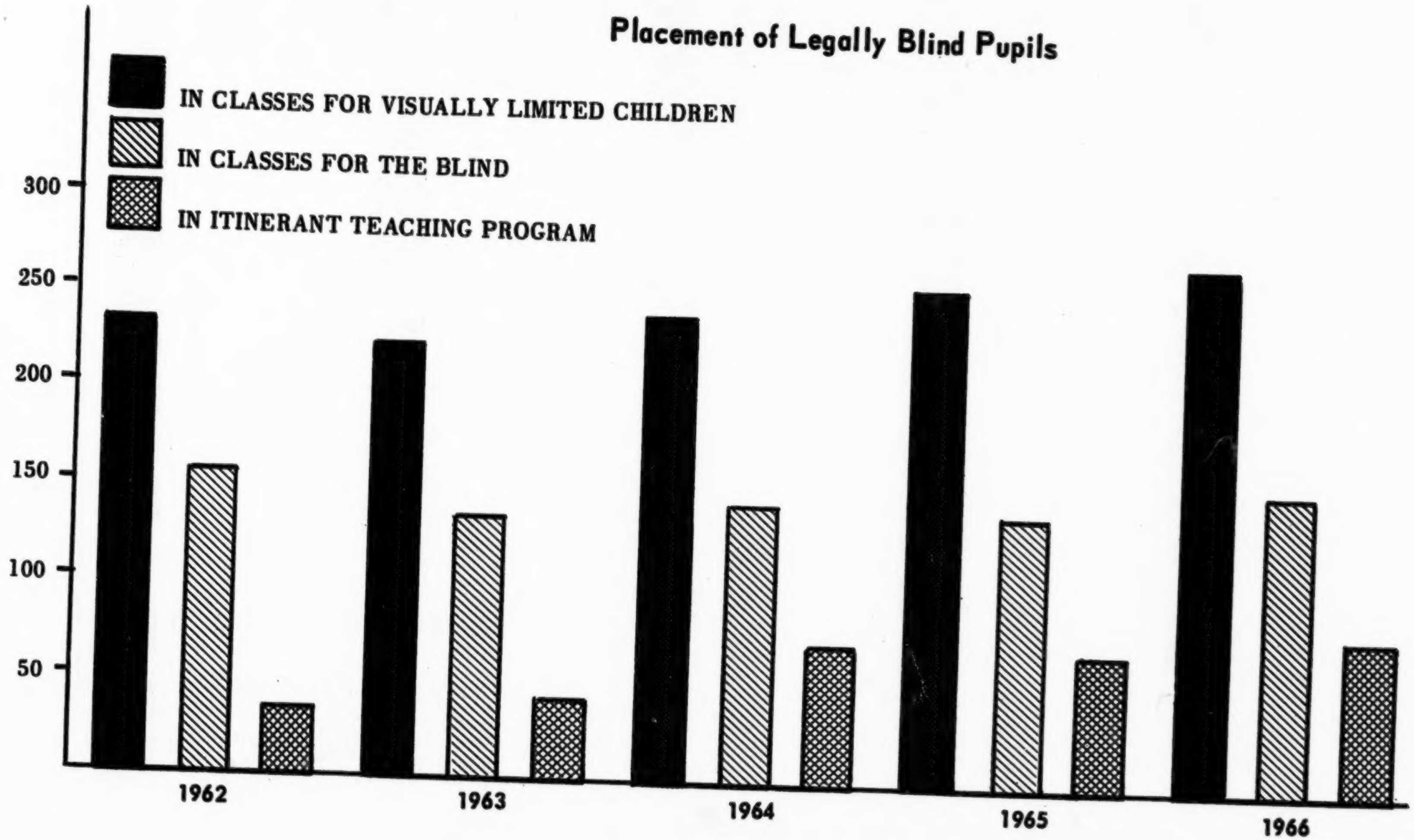
The chart on the placement of legally blind pupils indicates that the majority of these pupils is educated as sighted children in classes for visually limited children or in the itinerant teaching program. The reason is that the majority of legally blind children has sufficient residual vision to be able to read print. For example, the survey dated January 1, 1966 shows that the 509 legally blind students in the various programs of the Bureau used the following types of reading material:

141 Braille exclusively
5 both Braille & large print
138 large print
189 large & regular print
36 regular print

These figures change from year to year. However, proportions or percentages in each category remain quite consistent, i.e., they vary within narrow limits.

Enrollment in Classes for Visually Handicapped Pupils





Placement of Legally Blind Pupils

II

The Resource Class Program

The progress of a visually handicapped pupil in the resource program depends, to a large extent, upon the joint efforts of the resource teacher, the regular teachers, and other school personnel who provide services to pupils. It is important that the cooperative roles of the resource teacher and of the regular teachers be understood. This may be accomplished in several ways. A series of informal talks between the resource teacher and the regular teachers is suggested as an important means of communication. These discussions will reveal the services that can be rendered to meet the needs of the visually handicapped pupils. A discussion of the resource program may, with the principal's approval, be included on the agenda of a faculty conference, a grade conference, or a departmental conference. Written communications may also prove helpful in sharing information about the immediate and future needs of the visually handicapped pupil.

Regular teachers and other staff members such as the public health nurse, guidance counselors, supervisors and administrators will have a better understanding of the program if they are encouraged to visit the resource room. An understanding of the visually handicapped pupil's abilities and limitations by those who work with him will facilitate his active participation in the learning and social experiences of the school.

SUGGESTIONS TO REGULAR TEACHERS

1. The Teacher's Attitude

The attitude of the regular teacher toward visually handicapped pupils will determine, to a great extent, the attitude of the other students in the class toward these pupils.

Teachers should be aware of the opportunities for learning presented by having children with physical limitations in their classes. Although modifications in programing, assignments, materials, seating, etc., may at times be necessary, understanding rather than leniency best serves the interests of these pupils. The teacher emphasizes the abilities of visually handicapped pupils and holds them to the same standards of work and behavior as the rest of the class. The regular teacher is always welcome to survey and become acquainted with the special materials and equipment that the visually handicapped pupils may use in both the resource and the regular classrooms.

Belonging to a group of peers and being accepted by them has a wholesome effect upon the development of any child or adolescent. With the handicapped pupil this factor is very important. He should be included in as many class activities as possible. He might be a helpful addition to the school orchestra or chorus. He, too, should be considered for a role in a class play or assembly program. If the class is programed for a special project, a model lesson, a trip, or any other school event, the visually handicapped pupil should be included.

2. Student Aides

A visually handicapped pupil may benefit from the assistance of a normally sighted classmate. Student aides often prove to be valuable in assisting visually handicapped pupils, the regular teachers, and the resource teacher. The resource teacher recruits and trains these student aides. On the high school level, more aides are used. They are directly supervised by resource teachers as they assist the visually handicapped students.

Blind high school student using raised line drawing kit for geometry, with assistance of student aide

3. Special Considerations

The same general methods of instruction used for the normally sighted pupils are equally valid for the visually handicapped students. Many of these pupils need assistance with such classroom activities as handling diagrams, chalkboard illustrations, map work, books with conventional print, science experiments, and mathematical symbols. The regular teacher recognizes that the tactile approach in certain situations may be helpful to some visually handicapped pupils. Teachers should be flexible in the type of assistance offered since not every pupil needs the same kind of help and since visual limitations vary greatly.

THE RESOURCE TEACHER

Programing

The resource teacher assists the administrative statff in finding the proper class placement for the visually handicapped students, based upon the students' individual needs. After taking into consideration the visual limitations noted on the eye examination report, academic records, formal and informal test scores, guidance counselor and agency reports, and other relevant data, the resource teacher will be able to suggest a suitable placement. Visually handicapped pupils who qualify may be placed in a program for intellectually gifted children, a special progress class, a special talent class, a class for slow learners, special groups for non-English speaking pupils, or any other special arrangement that may be suitable to their needs and abilities. Reassignment of a student to another class may be indicated upon further evaluation of the student's adjustment and progress during the term.

Good programing provides for adequate opportunity in the resource room in order to meet the needs of each pupil. The resource teacher arranges the schedule of the resource room to provide each pupil with time for individual or group instruction, independent study, and use of materials and equipment. Individual pupil programs and a composite class program for the resource room should be displayed in the resource room as a guide for the student, the teacher, supervisors, administrators, and student aides.

Planning

The program in the resource room is planned so that all the students are actively engaged in meaningful curricular activities. Materials which are needed for completion of assigned work should be available. These materials may be commercially produced or teacher made. The teacher encourages those students who will benefit from the special equipment to make use of such items as magnifying devices, audio aids, tangible braille equipment, and large print or braille books.

Visually limited students using enlarged materials

It is important that the regular and resource teachers plan and discuss the visually handicapped student's work, progress, and participation in class activities. To be able to anticipate student needs and plan adequately for them, the resource teacher exchanges information with regular teachers. When necessary, remedial work is arranged by the resource teacher in the area of the pupil's weakness. For the capable student a program of enrichment is provided within the resource room or elsewhere in the school. The resource teacher must also be aware of the specific curriculum activities in which the visually handicapped pupils are engaged so that suitable materials and modes of instruction may be planned for in advance. She should anticipate the need for enlarged and brailled notes, drawings, maps, and charts.

The resource teacher should have a copy of each textbook used by her students so that she may be able to work effectively with her students both in reinforcing learnings and in assisting them with homework or supplementary assignments. She will also need these textbooks to enable her to make necessary preparations or adaptations for the student or the regular teacher.

The resource teacher should plan for the administration of tests. While some visually handicapped students should take their examinations with their classmates when the materials to be used are adequate and when no additional time is required, other visually handicapped students cannot be expected to follow this practice. Where the student needs special or additional materials or devices or where he needs additional time, the administration of the examination should be handled by the resource teacher.

Where possible, the blind student should typewrite his work for the regular class. Where this is not feasible, the resource teacher will interline his Braille work. Plans for the orientation of the blind student in school and neighborhood should be developed and implemented as the need arises.

Plan Books

Because visually handicapped pupils in resource classes follow the curriculum as do all pupils in the regular classes, close teacher to teacher cooperation is necessary. The resource teacher should be acquainted with the various curriculum bulletins and should participate in school and district conferences set up to implement the use of such publications. It is essential for resource teachers to become familiar with the long-range as well as immediate plans developed by grade and subject teachers.

Plan books should reflect the work done with and the progress achieved by each pupil in the resource room. These plans should be simple and easy to follow; they should be individualized plans with the goals of each pupil; they should indicate the remedial needs of each pupil. Maintaining such a plan book is simplified by preparing individual plans for each pupil under three columns which may be labeled, "Specific Plans", "Progress", "Auxillary Activities" respectively. Some items which may appear under each column are:

1. SPECIFIC PLANS
    a. the curricular area and topic to be studied
    b. the texts and pages
    c. workbook and pages
    d. planned activities including remedial teaching, written work, special equipment used.
2. PROGRESS
    a. record of what each pupil has accomplished
    b. areas of weaknesses
    c. indications of remedial work needed.
3. AUXILLARY ACTIVITIES
    a. materials enlarged or brailled
    b. materials taped
    c. tests administered
    d. pupil's work checked and prepared for use of classroom teacher—e.g., interlining of brailled assignment
    e. orientation work with new pupils
    f. consultations with classroom or subject teachers, counselors, nurse, etc.
    g. liaison with Bureau supervisor, agencies, etc.

Obviously some of the foregoing items are of greater or lesser importance depending on whether the resource class is in a primary, intermediate, or high school. Equally obvious is the fact that not all items suggested will appear in all plan books each day.

On the primary school level these plans will reflect the work planned by the resource teacher for lessons she will organize or initiate. They will also indicate the progress made by her pupils and the assitance rendered to the students in the work of their regular classes.

On the high school level, individual progress reports are maintained for each student since the work of the resource teacher depends upon the nature of the work done in the subject classes.

On the intermediate school level, the plan book reflects aspects of both primary school and high school procedures.

Remedial Instruction

The remedial needs of a visually handicapped student may exist in any area of the curriculum. The resource teacher, in cooperation with the regular teacher, arranges for and participates in tutorial assistance which may be part of the student's individual program. In the resource room, the student may receive remedial instruction, individual instruction and assignments,

Small group remedial lesson in primary school resource class

tutorial assistance, and physical modification of his materials, where indicated, to help him cope with difficulties occasioned by academic or visual limitations.

The resource teacher together with the regular teacher analyzes student weaknesses to determine the type and extent of help needed. If the visually handicapped student encounters scholastic difficulties which are not directly related to visual problems, he is included in the school's remedial program. Such difficulties may arise in any area of the curriculum.

Braille resource teachers often familiarize students with the specialized vocabulary of different subject areas beforehand so that the lesson in the regular classroom will be more easily understood. In the Braille resource room, tutorial services also include the introduction and use of appropriate devices as required in the subjects for which the blind student is currently programed. As an extension of this service, the resource teacher is responsible for the orientation of the blind student in science laboratories, shops, classrooms, libraries, gymnasium, lunchroom, and other school facilities. For example, a geography lesson will mean more to the blind child if he has become familiar with the relief globe and maps beforehand. Tactual exploration of the equipment in the science laboratory such as test tubes, bunsen burner, etc., will be helpful to the blind student. Then, during an actual experiment in the laboratory or classroom, the blind pupil will know what most of the equipment is like, and will be able to concentrate on what is happening.

School Orientation

Most visually limited students adjust quickly to their school setting and usually without the need for special arrangements. Both students and school benefit when the former become well oriented to their physical surroundings.

However, in the case of blind students, the orientation process is more detailed, organized, and programed than for their sighted peers. The resource teacher helps to develop the student's confidence and ability in moving about the school. In cases where no vision exists the assistance of a buddy is often recommended. Those students who have residual vision sufficient for travel within the school unassisted, are encouraged to do so. A well-oriented student is able to make more efficient use of his school day since he acquires greater independence and more socially acceptable behavior.

GUIDELINES FOR THE REGULAR TEACHER

1. Records and Schedules

a. The visually handicapped child is on the official register of the regular class.

b. The regular teacher maintains the same records for the visually handicapped pupil as for all other pupils in the regular class.

c. The regular teacher arranges, in cooperation with the resource teacher, the schedule to be followed by visually handicapped pupils.

d. The regular teacher is responsible for rating on the report card, the visually handicapped pupil. Discussion with the resource teacher is often beneficial.

2. Procedures and Practices

a. The regular teacher plans with the resource teacher for the tutorial and/or remedial needs of the visually handicapped pupil.

b. The regular teacher and the resource teacher determine which materials would be helpful to the visually handicapped pupil in his regular classroom activities. The resource teacher will attempt to provide them.

c. The regular teacher includes the visually handicapped pupil in the general guidance program as well as other special services available in the school.

d. The regular teacher, after consultation with the resource teacher, may permit substitutions for and/or modifications of assignments depending on the availability of large print or braille texts or of recorded educational materials.

e. The regular teacher, as well as the resource teacher, encourages the visually handicapped pupil to use those optical aids which are of benefit to him.

GUIDELINES FOR THE RESOURCE TEACHER

1. Records and Schedules

a. The resource teacher maintains a record of attendance for those students assigned to the program.

b. The resource teacher maintains an individualized plan book for activities carried on in the resource room.

c. The resource teacher maintains pupil progress records and reports.

d. The resource teacher, in cooperation with the regular teacher, plans a schedule for the pupil's work in the resource room.

e. The resource teacher posts a master plan of individual pupil programs in the resource room and sends a copy to the principal.

f. The resource teacher prepares daily transportation reports.

g. The resource teacher and the school nurse will take appropriate action to obtain the eye examination appointments and the resulting E12S information in accordance with the procedures of the Bureau for the Education of the Visually Handicapped and of the Department of Health, respectively. (See pp. 88-91.)

2. Procedures and Practices

a. The resource teacher consults with the principal or the assistant principal about initial regular class placement of newly admitted visually handicapped pupils.

b. The resource teacher discusses with the regular teacher available pertinent background information about the visually handicapped pupil prior to his admission to the regular class. She also interprets the findings recorded in the eye report (E12S) and indicates their educational implications.

c. The resource teacher, in consultation with the principal or assistant principal and the regular teachers, evaluates suitable class placement of the visually handicapped pupil at the annual organization and at other designated times.

d. The resource teacher familiarizes the regular teachers with the special educational materials available in the resource room.

e. The resource teacher supplies the visually handicapped pupil with special materials as needed.

f. The resource teacher provides and/or arranges for remedial, tutorial, and coaching services for the visually handicapped pupil in any curriculum area.

g. The resource teacher brailles, enlarges, and/or records the necessary materials that will enable the visually handicapped pupil to participate in regular class activities.

h. The resource teacher makes special provisions for testing as indicated by the individual needs of the visually handicapped pupils.

i. The resource teacher may use audio aids such as talking books, tapes, and other recorded educational materials.

j. The resource teacher may, when appropriate, arrange for the teaching of typewriting skills to visually handicapped pupils.

k. The resource teacher as well as the regular teacher encourages the use of optical aids by those pupils who can benefit from them.

l. The resource teacher requisitions special instructional materials for use by the visually handicapped pupils.

m. The resource teacher provides guidance on health, personal, social, educational, and vocational problems, utilizing the available special services within the school. She may seek additional help from the personnel of the Bureau for the Education of the Visually Handicapped.

n. The resource teacher encourages the visually handicapped pupil to become increasingly independent.

o. The resource teacher acquaints the visually handicapped pupils with community services available to them.

III

Special Programs

ITINERANT TEACHING SERVICE

The itinerant teaching service was established in 1957 to give those visually handicapped children not in resource classes individualized instruction, to provide suitable materials, and to offer consultant service to the staff of the educational milieu in which the child is functioning. The itinerant teacher is fully qualified in the area of the education of visually handicapped children and youth.

Students are admitted to or discharged from this program only with the approval of the consultant ophthalmologist at the Department of Health.

The goal of the itinerant teaching program is to help the visually handicapped student maintain himself successfully in the scholastic sphere in which he is currently placed. The itinerant teacher may serve children in any area of the public school system. She serves visually handicapped children who cannot be placed in a resource class for one of two reasons: (1) either they live in outlying sections of the city so that bus transportation to a resource class cannot be obtained or (2) the visual disability is secondary so that placement in other classes with specialized curricula and physical settings are more suitable for them. This is in accordance with the principle that placement in a resource class for visually handicapped pupils presupposes normal intellect and mobility.

In other words, a visually handicapped pupil is given itinerant teaching service to implement recommendations of the consultant ophthalmologist of the Department of Health when such pupil cannot be placed in an established resource class for any of the following reasons:

1. Geographically not feasible
2. Department of Health recommendation for placement in a class for physically handicapped children
3. Bureau of Child Guidance recommendation for placement in a class for children with retarded mental development
4. Admission to kindergarten in a neighborhood school
5. Admission to a school with a speech center
6. Admission to one of the "special" high schools, such as the Bronx High School of Science or the High School of Music and Art
7. Admission to a vocational high school
8. Admission to one of the hospital classes
9. Admission to one of the programs for socially maladjusted children
10. Admission to a junior guidance class

11. Admission to a class for the brain injured
12. Admission to a school for the deaf
13. Admission to a class for intellectually gifted children
14. Admission to a cerebral palsy unit

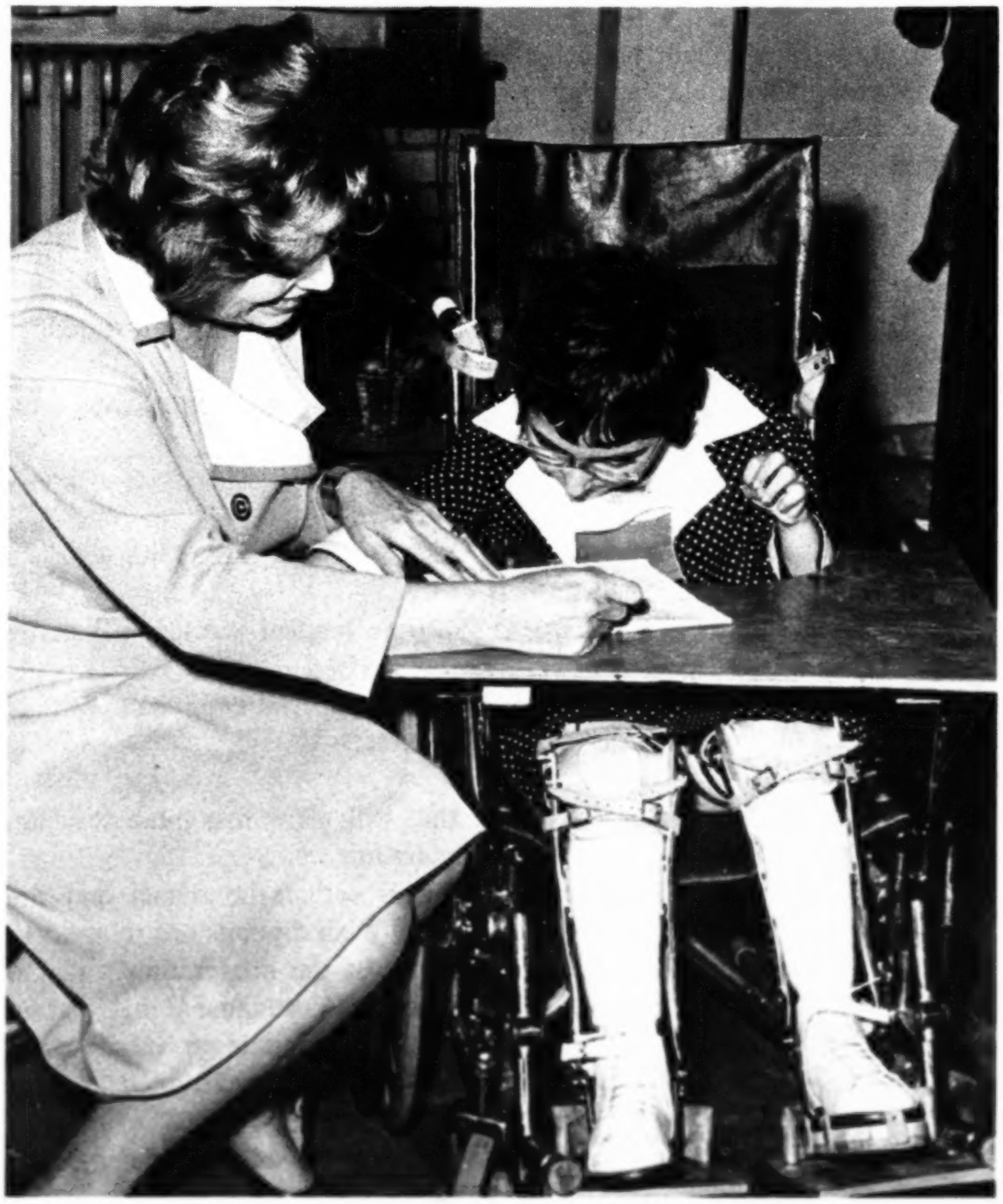
In classes for the mentally retarded, the itinerant teacher service usually consists of providing needed special material, and consultation with school personnel rather than direct teaching service.

Usually visually limited children in the first grade are allowed to attend regular classes in their neighborhood schools because, on this level, the materials used are satisfactory. For functionally blind children in the first year, regular class placement in the neighborhood school is permissive. However, in either case, if the child encounters difficulty, placement in a resource class will be effected. In addition to direct remedial and tutorial teaching an essential part of the activities of the itinerant teacher include:

1. Defining the visually limited and braille programs in general and the itinerant programs in particular to the school staff, parents, and community
2. Becoming familiar with the specific policies of the schools in which she serves and complying with them
3. Interpreting ophthalmological findings and the accompanying educational implications to all interested personnel
4. Preparing the pupils for participation in regular class and school programs
5. Evaluating the needs of the student with the aid of his teachers and the school administration
6. Preparing and/or securing enlarged or brailled instructional materials as needed
7. Instructing pupils in the use and care of special equipment such as the bulletin typewriter, braillewriter, etc.
8. Maintaining adequate records
9. Arranging a personal schedule that will allow maximum teaching time and keep travel time to a minimum
10. Cooperating with guidance personnel within the school and the Bureau to make certain that the legally blind pupils are referred to the Vocational Rehabilitation Service at the proper time and the visually limited pupils to the Division of Vocational Rehabilitation
11. Suggesting and planning for referrals to appropriate agencies through the Bureau for the Education of the Visually Handicapped
12. Administering tests where there is need
13. Working with the school health service to obtain completed E12S forms (See pp. 88-91.)

14. Suggesting seating arrangements or other modifications for the visually handicapped student
15. Screening a child prior to placement upon the request of a Bureau supervisor or the consultant ophthalmologist. Similarly, upon request, she reports on the child's ability to function in the regular class. The amount of time spent with the student will depend on need.

Itinerant teacher with a visually limited child in a cerebral palsy unit



Special projects have been initiated within the Bureau and have been implemented by itinerant teachers. Some of the projects include the following:

1. Plan and conduct, in cooperation with the special class teacher, field trips with multiply handicapped blind children.
2. Set up programs to encourage pupils in Braille classes to use whatever residual vision they may have. (This vision would not be sufficient for them to function in a class for visually limited children.)
3. Teach touch-typing to mentally retarded, visually limited students at the Occupational Training Center.
4. Organize volunteers to transcribe and duplicate books in braille and large print to supplement books available through other sources.

EDUCATING MULTIPLY HANDICAPPED BLIND CHILDREN

The multiply handicapped blind child presents provocative problems to the parent, the diagnostician, and the educator. It is not a minor problem. Without a total team approach, this child may well be lost in the maelstrom of a large city. In a study by Cruickshank and Trippe, of 469 blind children in residential schools, it was found that 168 had at least one other disability in addition to blindness.*

Recognizing the extent and the depth of the problem, the New York City Board of Education established three classes in 1959 for emotionally disturbed blind children. Three major agencies underwrote the auxiliary services required to identify, diagnose, treat, and place such children in a suitable school situation. Since 1959, two more classes have been established to provide services for the disturbed, and five to educate the mentally retarded blind child.

The assistance offered by the agencies cover a wide spectrum and include ophthalmological, pediatric, and psychiatric services; psychological testing; parent counseling; and therapy, if indicated.

Children are admitted to the classes for the mentally retarded blind after reports from the agencies are submitted and approved by the Bureau of Child Guidance and screened by a supervisor from the Bureau for the Education of the Visually Handicapped. These reports are correlated within the agency and the Bureau for the Education of the Visually Handicapped. Registers in these classes must be small if the program is to be effective.

There are children who cannot be accepted in public schools until changes

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*Cruickshank, William M. and Matthew J. Trippe. *Services to Blind Children in New York State*, Syracuse University Press, 1959, (pp. 176-177).

in deviant traits have been, to a degree, overcome through participation in nursery school programs. These nursery school services are also provided by the agencies.

Multiple handicaps are usually severe in nature. They include psychiatric problems, speech problems, echolalia, autism, mental retardation, epilepsy, brain damage, cerebral palsy, and hearing loss. Referrals come to the Bureau through direct communications from interested individuals as well as from agencies, hospitals, the Bureau of Child Guidance, the Public Health Service, and the Bureau of Attendance.

The classes are self-contained units, but provision is made for field trips, playground experiences, and assembly programs. It is not unusual for these pupils to participate in the latter.

Programs are developed on an individually structured basis. For this reason the services of an aide are desirable.

The purposes of these classes for the multiple handicapped blind children are to:

1. provide a warm, wholesome atmosphere for growth and learning
2. provide a structured situation that will enable the child to recognize and observe reasonable limits
3. help the child develop wholesome personal relationships
4. help develop mobility skills, and
5. teach the child those academic skills that are within his competence.

As many aspects of the normal curriculum as possible are followed, allowing for modifications required by the disturbances characterizing these pupils. However, because of hyperactivity, short attention span, and poor tactile sense as well as general disability, the progress of many of the children is impeded.

These are not static placements and children are assigned to other situations according to ability and adaptability. While they are in their special classes, self-help skills are emphasized. In addition, good grooming, table manners, improvement of gait and posture, proper diet, and safety education are basic to the program for the more stable groups.

Without a team approach to the multiple handicapped blind, a significant part of the program would be nullified. The parent-teacher relationship is a vital one; if the skills taught in the class are not reinforced in the home, the child will retrogress.

Recreation is an important part of this total service. Here again, the agencies are of immeasurable value. They sponsor Saturday recreation programs, music lessons, and a Boy Scout Troop for retarded youngsters. Summer programs are also available and this service is expanding.

SPECIAL CLASS ORGANIZATION

The special class organization is maintained in a few schools to meet the specific needs of visually handicapped pupils who require a more structured environment to be able to function adequately or who can make satisfactory adjustments only in a small group situation. Though not mentally retarded, these children may be academically retarded and cannot, without intensive help, meet the standards of the grade appropriate for their age. The individualized instruction and guidance provided in the special class are techniques utilized to enable these children to make better progress.

In cooperation with the school health services, the Bureau of Child Guidance, the Bureau of Speech Improvement, other bureaus within the Board of Education and private agencies, an attempt is made to pinpoint and, if possible, to correct any underlying causes for the lack of achievement.

The pupils are not in an isolated situation for they take part in all appropriate school activities, including participation in a regular class for a limited period, depending upon each student's needs and abilities. Although intensive work is done in the major curriculum areas, there is an enrichment of the child's background through storytelling, dramatic play, field trips, music, etc. The principal functions of these activities are to stimulate the pupil's interest and to activate in him a desire to learn.

On the intermediate school level the curriculum areas to be stressed in this type of class are determined by the needs of the students who have been assigned to this group.

IV

Curriculum Adaptations

GENERAL INFORMATION

Resource teachers provide their students with those special materials that will enable them to function as effectively as possible. For example, large print books, braille books, and recorded material are used widely by students at all school levels.

These materials may be used in regular classes or at home. Resource teachers will enlarge or braille those conventional materials which are needed by the visually handicapped students because of the work assigned by the regular teachers. In the case of blind students, it may be necessary to resort to readers when recorded materials or braille material is not immediately available for a particular assignment. On the secondary level, where changeover of texts are frequently contemplated, the resource teacher attempts to acquire the new material in time for its introduction in the regular class assignments.

The use of magnifiers and low-vision lenses enable some students to handle conventional print. Where indicated, a specific text may be enlarged photographically, and then reproduced by xerography if multiple copies are required.

Many visually limited students can use regular print and should be encouraged to do so. However, mimeographed and liquid duplicated matter often lack the clarity required by these students. The resource teacher will have such materials enlarged.

When it is clear that a particular assignment will require additional time in order to be completed, the resource teacher will so inform the regular teacher regarding the need for such an extension. When comparable, but not exact, materials are available in the special form (braille, enlarged, recorded), the resource teacher should ascertain from the regular teacher what substitution may be made. Visually handicapped pupils should learn to use comparable texts effectively through proper utilization of the table of contents and index. Such substitutions or modifications may be extended to include maps, diagrams, posters, etc., which may be adapted to meet the needs or limitations of a given student.

The guiding principle, therefore, is to have the student accomplish as much as he can after being given the maximum resources and assistance available from his resource teacher but with a minimum loss of time from the regular class program and activities.

BRAILLE READING SYSTEM*

"Numerous questions have been raised which highlight the curiosity and interest of school personnel in the Braille system of reading and writing. In an attempt to satisfy this interest insofar as it affects regular school provisions for blind children, a brief explanation of the Braille system is set forth below. Thus, as we face this challenge of working with these children, some insight and understanding of Braille will enable us better to contribute to their achievement and growth as outcomes of their satisfactory integration among our seeing boys and girls.

"Blind children are taught the Braille system of reading and writing which was perfected by Louis Braille in 1829. Braille is a system of raised dots with characters formed by using one or more dots from the following arrangement:

1 . . 4
2 . . 5
3 . . 6

"This arrangement is referred to as a braille cell. Each dot in the cell is numbered from 1 to 6 and is known by its number. By means of various combinations of these six dots, the child is able to write the equivalent of any ink print character. Some expressions, however, require the use of portions of two cells in combination.

"Standard English Braille consists of two grades: braille grade 1 and braille grade 2. Braille grade 1 consists of the letters of the alphabet, punctuation, and numbers. However, because of the size of braille letters and the fact that they require so much space on writing paper, many words written in Braille are contracted and abbreviated. These make up a part of standard English braille grade 2 which includes all of braille grade 1, plus 189 contractions and short-form words. No attempt will be made here to explain fully the braille system. However, to provide insight into some of the problems braille presents to the child, a few comments and explanations are given.

"Outlined below is the alphabet, with each letter expressed by its equivalent in Braille. The letters *a* through *j* also represent the numerals *1* through *0* when preceded by the numeral sign. Note that there is a definite pattern in the representation of these Braille symbols in that the first ten letters are composed of the four upper dots, that is, 1, 2, 4, 5, and use lines 1 and 2 only of the Braille cell.

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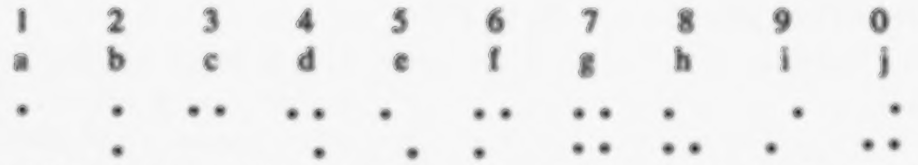
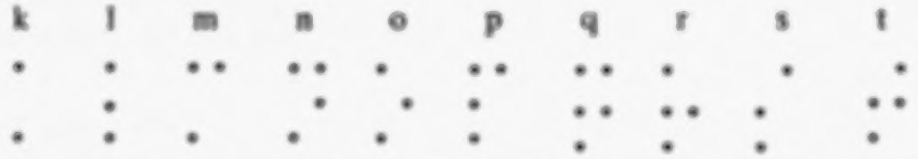
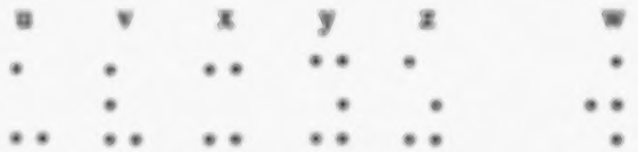
*"Braille Reading System Explained." *Blind Students in Junior and Senior High Schools*, pp. 2-3. N.Y.S. Department of Education, Albany, N. Y. (Reprinted by special permission).


1
2
3
4
5
6
7
8
9
0
a
b
c
d
e
f
g
h
i
j

"The second ten letters are formed by simply adding dot 3 on line 3 to each of the first ten letters.

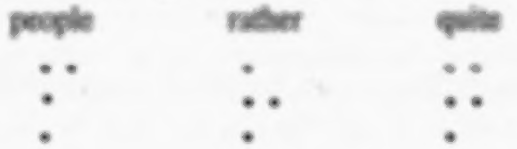

k
l
m
n
o
p
q
r
s
t

"By adding dot 6 on line 3 to letters *k* through *o*, the letters *u* through *z*, not including *w*, are formed. Since the letter *w* is not a part of the French alphabet, Louis Braille did not use it and therefore *w* had to be added to standard English Braille.

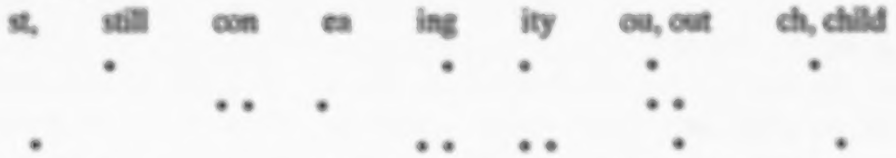


"And now a few comments concerning Braille contractions and abbreviations. A contraction is a sign used to express a sequence of two or more letters. Contractions may consist of one or more cells and may represent part words or whole words. Several examples are shown below:

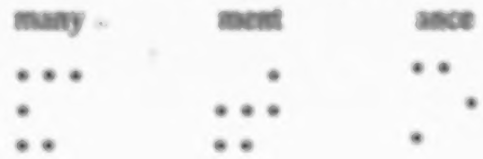
"The following examples are whole word contractions and are represented by their initial letters expressed in grade 1:


people
rather
quite

"The following signs represent part words and a few represent whole or part words:


st, still
con
ea
ing
ity
ou, out
ch, child

Note that these expressions use parts of two Braille cells.


many
ment
ance

"What is the blind child's approach to writing? Use of the braille slate and stylus is the traditional device for writing Braille by hand. All slates include a metal frame or guide about 11 inches wide and about 1¾ inches tall. It is hinged at the left so that paper may be placed between the top and bottom of the guide. The type of guide used most frequently has four rows of cells so that the guide must be moved downward after the child has written four lines.

"To simplify the writing of Braille, a mechanical device known as a braillewriter (comparable in size to a typewriter) has been developed which enables the child to write much more rapidly and with considerably less fatigue than with the use of a hand slate. The braillewriter has a keyboard of six keys, each representing one dot of the Braille cell. The six keys are divided into two sets of three with a space bar between the two sets. The three keys at the left of the space bar represent dots 1, 2, and 3 of the Braille cell. Those to the right represent dots 4, 5, and 6. These keys may be depressed in any combination and thus one is able to write any combination of the six dots in the Braille cell."

The dots are produced on the upper surface of the paper because the under surface receives the impression of the braillewriter. Unlike the braille slate, therefore, the material produced by the braillewriter does not have to be turned over for reading. Other special writing and computation devices are used and are described in the section, "Special Aids and Equipment."

THE NEMETH CODE

In order to facilitate the study of mathematics and the sciences, a special code of braille notations was formulated by Abraham Nemeth. It is a highly contracted code. Some symbols for modern mathematics have been added but emphasis has been placed upon reducing to a minimum the space required.

BRAILLING A FOREIGN LANGUAGE

Foreign language transcription uses the letter-for-letter notation of the Grade I braille alphabet. The symbols for accented vowels differ in each language and are merely substituted for the accented letter. No contractions are used.

MUSIC BRAILLE

In transcribing music into braille notations for blind students, the sixty-three symbols used in literary braille represent the notes, their pitches, their rhythms, their values, and additional markings.

In studying any instrument, the blind student must memorize every selection he is to play.

SPECIAL AIDS AND EQUIPMENT

Resource classrooms for visually handicapped children are provided with special instructional materials that help these pupils to keep up with their normally-sighted classmates in all curriculum areas. Such equipment includes books in Braille and large type on unglazed paper with simple, clear illustrations; maps, globes, and charts; typewriters; magnifying devices; low-vision aids; audio devices such as tape recorders, radios, and record players; and special equipment for the blind. The following list describes some of the more important items:

Braille Ruler with Caliper Guide is a regulation 1-foot ruler, to which has been added a sliding caliper guide for determination of measurements. Rasied lines lead back from the reading edge indicating eighths, fourths, halves and inches, with Braille figures at the inch divisions.

The steel caliper guide is designed to aid in reading measurement, as well as to set the ruler for a series of identical measurements. This makes it possible to take measurements, set the guide, and then remove the ruler from the material being measured for easy reading with the fingers.

Braille ruler with caliper guide

The Braille Slate and Stylus are the traditional device for writing Braille by hand. All slates consist of a metal frame (or guide) which may or may not be designed to be mounted on a solid board, and a pointed steel punch with

Using the Braille slate and stylus

a handle, called stylus. Each guide consists of two parts connected at the left end by a hinge. The face of the bottom of the guide is pitted with four lines of a series of six small, round depressions corresponding to the shapes and spaces of the dots of the Braille cell. In order to guide the stylus in punching the dots, the top of the frame is punched with four lines of holes which outline the individual Braille cells and correspond to the arrangement of the pits in the bottom of the guide. To write on a slate, paper is inserted between the top and bottom of the guide, being held in place by small pins, and the Braille dots are punched downward into the paper, thus making it necessary to write from right to left in order that, when the paper is turned over in position for reading, the Braille characters can be read from left to right.

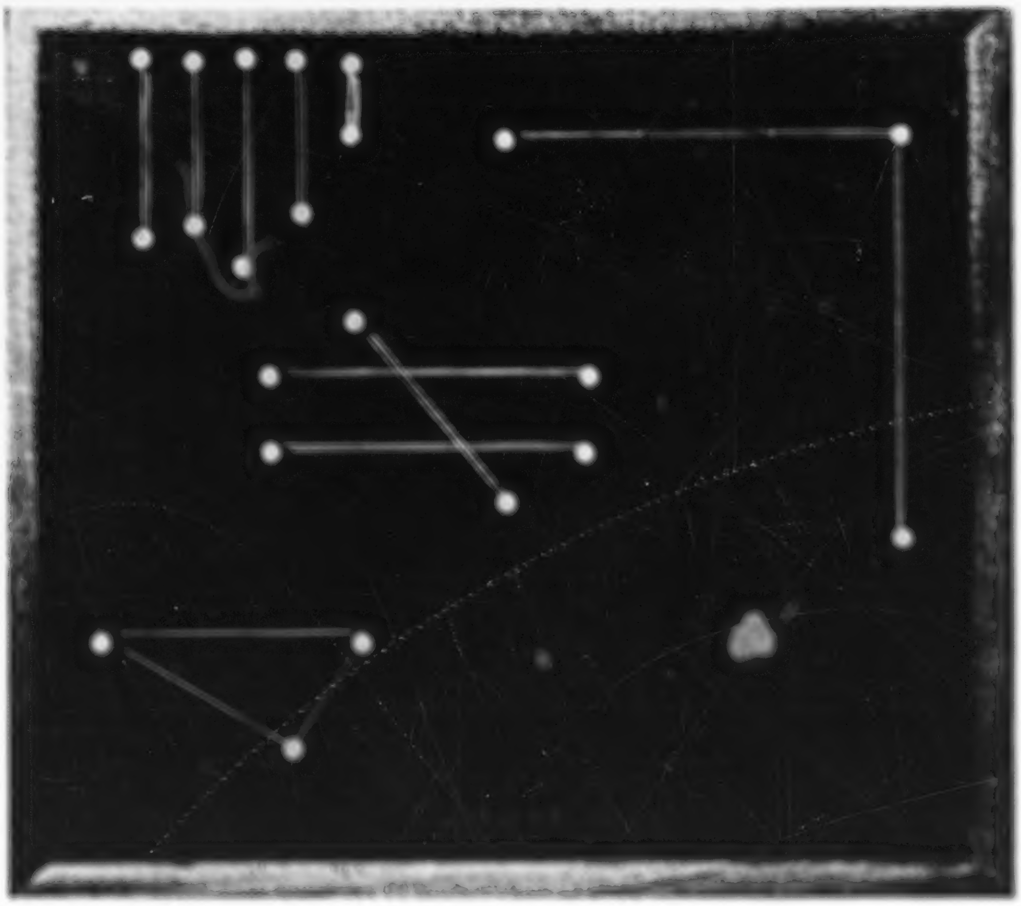
The Braille slate and stylus is easily carried to class to be used for note-taking in all the subject areas. It is a slightly slower method in Braille reproduction than the use of the braillewriter.

Braillewriter is a machine which has six keys, one for each of the braille dots with which to produce standard size Braille. The blind pupil uses this machine to write Braille quickly and accurately. It is more commonly used for work in the resource room.

Blind primary school pupil using Braillewriter

The Brannan Cubarithm Slate is a device consisting of a square, plastic frame and a set of one hundred plastic cubes. The cubes contain the Braille digits from one to nine and zero, plus the letter *O*. The main purpose of the device is to aid in the teaching and working of problems of long division, multiplication of large numbers, subtraction, and addition.

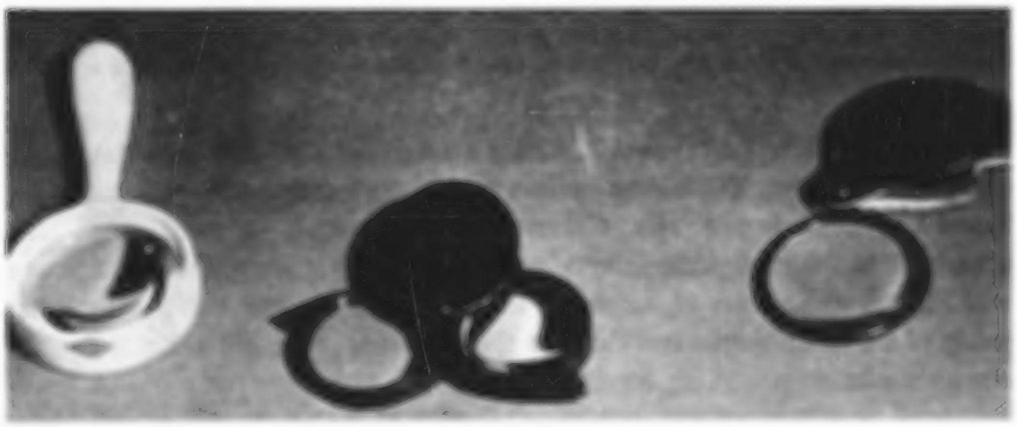
Graphic Aid for Mathematics consists of a cork composition board on the surface of which has been mounted a synthetic moulded rubber mat embossed with vertical and horizontal lines spaced one-half inch apart. Accompanying the board is a supply of plastic-headed pins, rubber bands, and flat spring wires. These are to be used in the construction of geometrical and other mathematical figures on the face of the board by inserting the push-pins at various coordinates and connecting these points with rubber bands (for lines) or the flatspring wires (for circles and arcs). With the use of the board, students are able to construct any plane geometrical figure necessary for the study of arithmetic, algebra, plane geometry, trigonometry, analytical geometry and differential and integral calculus. It can also be used to construct bar and circle graphs, and as a game for younger children.



Graphic aid for mathematics

Magnifying Devices and Low-Vision Aids include telescopic, microscopic, and magnifying lenses; hand magnifiers; and desk magnifiers.

Samples of magnifiers used by visually handicapped pupils



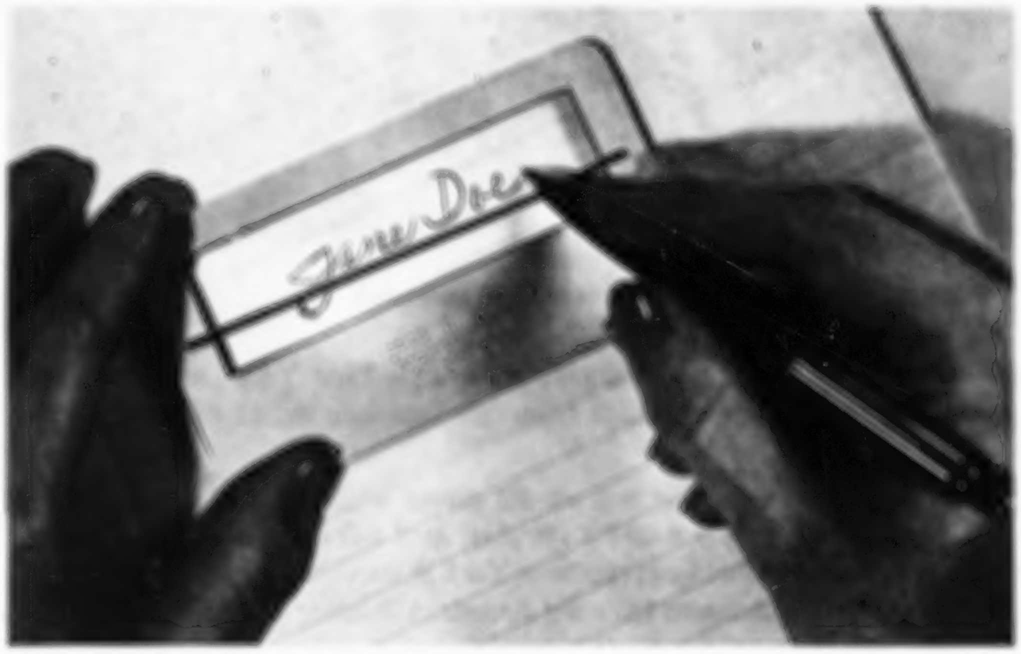
Maps, Globes, and Charts of the raised or embossed types, give invaluable assistance to the blind pupil in the area of social studies. For the partially-sighted pupil, enlarged outline maps are used as well as wall maps in which the outline rather than excessive detail is emphasized. Such maps are also printed in sufficiently contrasting colors so that there is no difficulty in distinguishing contiguous areas.

Blind high school students using embossed globe with help of student aide

Mitchell Wire Forms with Matched Planes and Volumes consists of a set of geometric figures illustrating outline forms, planes, and volumes commonly found in geometric problems. Corresponding figures in all three forms have been built to the same scale (the cube is 3" x 3" x 3"), so that the wire frames will fit over the planes of the same shape as well as over the planes of the solids of the same shape, and the planes themselves are of the same shape and size as the same planes on corresponding solids.

Sewell Raised Line Drawing Kit is used for making the diagrams in many subject areas. The drawing board is rectangular in shape. The back of the drawing board is a hard material (masonite) and the top is covered with a layer of very elastic gum rubber. Screw type clips are provided near one end of the board for anchoring the plastic film. The plastic film is really the drawing paper used in this apparatus. The drawing instrument is a modified form of a ballpoint pen.

Signature Guide is designed for use by blind people able to sign their names in script, but in need of a device which will help them write on a straight line. It is made of aluminum with a rubber backing which will help hold it in place when writing. A piece of rubber elastic stretched across the open frame gives a guideline for writing, at the same time permitting dropping below the line of writing for lower ends of some letters. Writing is done with a pencil or ballpoint pen.



Signature guide

Talking Books. The Library of Congress, through its Division for the Blind, provides talking book records and reproducers (talking book machines) for children who are legally blind. The talking books are recordings of books, plays, articles, etc. done by readers on a high professional level. Application for borrowing talking book records is made to the Library for the Blind, New York Public Library, 166 Avenue of the Americas. This is the lending agency

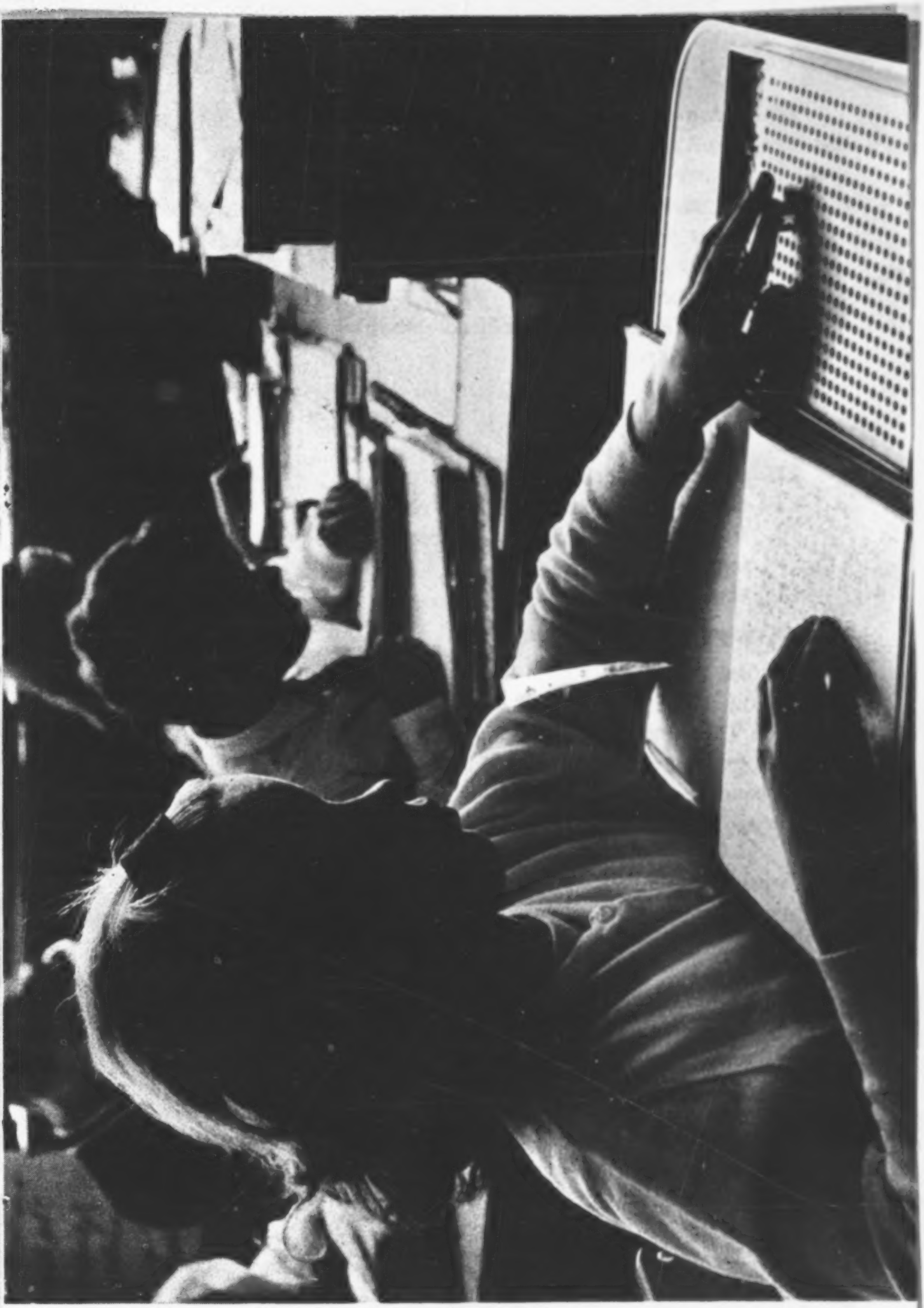
Primary school small group using recorded materials

designated by the Federal government to serve the New York City area. Talking books may also be purchased from the American Printing House for the Blind.

Talking Book Machine is a record player which operates at speeds of 16⅔ and 33⅓ rpm. It is used for the playing of talking books. Legally blind people may borrow them from the New York State Commission for the Blind. They may also be purchased from the American Printing House for the Blind.

Taylor Slate and arithmetic type consist of a metal frame and a set of plastic type. There are four hundred and thirty-two octagonal cells in the frame with a tray at one end for holding the extra type when the slate is in use. By placing the square type into the octagonal holes in the frame in certain positions, the child is able to work problems in long division, multiplication of large numbers, subtraction, and addition.

Typewriter, Bulletin is a typewriter with a standard keyboard, large, bold-faced type, with upper and lower case letters.



Primary school blind pupil using Taylor slate for mathematics in regular class

Miscellaneous: The following are some of the more commonly used items that are adapted in braille for blind students:

1. kitchen aids
2. thermometer
3. scales
4. vernier caliper
5. micrometer
6. Swail Dot Inverter (for hand embossing line drawings)
7. protractor
8. compass
9. script guide
10. embossed graph paper
11. raised line checkbook
12. clocks and watches with braille notations
13. Beetz Notation-Graph (a device for indicating musical notations in tangible form)
14. abacus

MAGNIFYING DEVICES

The use of magnifiers has enabled many visually limited pupils to use regular-print editions of material in both the resource room and the regular classroom. The particular type of magnifier used is based on individual need and, to some extent, on personal adaptability and preference. The Bureau supplies hand magnifiers to students on all school levels. These magnifiers are small enough to fit into pocket or pocketbook.

Using a hand magnifier

High-powered magnification built into eyeglass frame

The introduction of small adjustable monocular telescopes has enabled students with visual acuity in the range 20/100 to 20/200 to see chalkboard material from their seats. Since the telescope is held easily in the fingers or palm of one hand, the other hand is free for copying notes or assignments.

Low vision lenses which are set into eyeglass frames can be of great help Generally, the agency or ophthalmologist handling a "low vision" pupil, instructs the boy or girl in the proper use of the aid. Some students require a period of time during which their tolerance is increased. During this period,

Using hand telescope to copy boardwork

encouragement and understanding on the part of the teachers is helpful. Low vision lenses require that the materials being viewed be held very close to the eye.

The large projection magnifier, which is not portable, has very limited use in the resource room. Some students will use this device occasionally on small diagrams, maps, or tables encountered on the secondary school level.

LANGUAGE ARTS

Those reading activities that a visually handicapped student experiences in the regular classroom are supplemented by a program of extended activities in the resource room where individual attention is given to each pupil for development of reading skills. The resource teacher will be working with students who are good readers, average readers, and non-readers. The resource teacher reinforces such language art skills as word recognition and comprehension, skimming, making outlines, use of the dictionary and indexes, extracting main ideas, locating details, clarifying concepts, using the table of contents, etc. The resource teacher may enlarge or braille vocabulary and spelling lists, homework assignments, and other materials for individual students who may require this help. For those students who are sufficiently capable and require no remedial work in reading, the resource teacher plans a program of enrichment or she may tutor such pupils in the curriculum areas in which they do have weaknesses requiring attention.

Reading development is improved by a rich experiential background. The resource teacher encourages her students to speak about their everyday experiences. Many of their stories may be put on the tape recorder. Oral expression stimulates reading development. The resource teacher evaluates the individual pupil's speech for improvement in pronunciation and good usage, and for areas of weakness that need further remedial practices. Some cases may be referred to the speech improvement teacher.

Listening to the radio, records, or the tape recorder is a means of developing reading readiness in the primary grades, and of acquiring information in the upper grades. Active participation is encouraged. Well-planned trips that may have been taken with the regular class also provide a stimulating climate for language development.

Good listening skills are developed as part of the language arts program. These skills are of particular value to visually handicapped pupils. During the average school day varied types of listening activities are encountered, some of which are teacher-planned—conversation, discussion, reports, committee work, oral directions, plays, music, announcements, storytelling, reading aloud, radio, dictation, talking book, tape recorder, and others. With all these opportunities available, the resource teacher trains visually handicapped pupils in

Reading brailled literature books

the habit and skill of good listening by asking pupils to report, summarize, outline, explain, answer or ask questions, or interpret what they heard.

Although much of the foregoing is applicable to the functionally blind child as well as to the visually limited child, the former faces a different problem in learning to read and write because his major medium of written communication is Braille. The blind child, in learning to read Braille, must gain skill in fine tactual discrimination—just as the sighted youngster must learn good visual discrimination to enable him to note differences in the various letters. The blind child can develop the needed skill through many sorts of tactual experiences. He must be encouraged to be curious about his environment, to examine carefully the things around him, to distinguish shapes, sizes, and textures. This will help him as he begins learning nearly four hundred Braille contractions which he must eventually commit to memory.

First attempts at reading are oral. Later, more time will be spent in silent reading provided a measure of independence in Braille has been attained. As the resource teacher begins formal reading with the blind child, she will use many approaches which include storytelling, flash cards, experience charts, word games, and phonics materials. These techniques are similarly useful with all children.

A blind pupil who can read and write Braille can be expected to take part in committee work, make reports, and handle other regular class assignments. He brings his braillewriter or slate, braille books, and supplementary braille materials to the regular classroom, and, while his methods may be different from that of a sighted pupil, he can attain similar results. The resource teacher cooperates by planning for a continuous program in the teaching of Braille skills which is coordinated with the language arts program in the regular class.

SPEECH

Visually handicapped pupils, like their classmates, may receive the services of the speech improvement teacher assigned to the school. The former may be referred for speech therapy by the resource teacher or by the regular teacher. The speech improvement teacher schedules the visually handicapped pupil to work with her on his speech problem. She may assign speech exercises or other material for practice at home or in the resource room. The resource teacher will enlarge or braille material as needed.

The speech improvement teacher maintains a record of the speech progress achieved by the visually handicapped pupil. On the basis of her work with this pupil, she makes recommendations to the resource teacher for further help or remedial work. This may include oral reading, practicing sound formations, use of the tape recorder, and listening to samples of good speech recordings.

Puppetry, also used in other areas of curriculum, helps in speech and language development. Manipulating the puppets and speaking the roles involved in the production aids the pupil in acquiring self-confidence as well as good speech habits.

In special cases, where the situation warrants it, the speech improvement teacher, after consultation with the resource teacher, may recommend admission to a school with a speech center. In this event, itinerant teaching service would be provided by the Bureau for the Education of the Visually Handicapped.

In high school, all pupils, including visually handicapped pupils, are programed to speech classes and, if needed, speech improvement classes.

TYPING

Touch-typing is taught in the resource room when the pupil is ready to learn this skill. This may be as early as the fourth grade. However, it should be delayed if the pupil is behind in school work, is physically not up to par,

Blind student in high school typing class

or displays poor motor coordination. On the intermediate and high school levels, the visually handicapped student should be programed for a regular typing class.

When the visually handicapped student takes typing in the regular subject class, the resource teacher may be able to promote his progress by enlarging or brailling material he needs or by providing him with large-print typewriting textbooks as required and by arranging with the subject teacher for the correlation of the work in this text with the work of the class. If the opportunity permits, the visually handicapped student may be allowed to practice typewriting skills in the resource room. He should be encouraged to type his reports and assignments.

MATHEMATICS

The resource teacher helps the visually handicapped student develop his mathematical skills by reinforcing lessons given by the regular teacher, by providing remedial instruction, when necessary; and by supplying the student with special materials that might be helpful. She provides large print textbooks, if they are available, for students who require them and enlarges or brailles, when necessary, daily assignments, graphs, charts, diagrams, and other representative material needed by the visually handicapped student. Large print workbooks are also available. Such extra help is particularly important in mathematics where problems involving fractions, decimals, graphs, and exponents may present difficulties; where numbers are easily confused with one another, such as 3 with 8; and where the use of many tables of small, closely-spaced numerals may present visual difficulties.

Methods for helping visually handicapped pupils grow in mathematical ability are the same as those used for the non-handicapped pupils. However, in teaching the former, greater emphasis is placed on training the imagination and memory, on oral work, and on mental arithmetic. The resource teacher also stresses neatness and organization so that problems and numbers do not run into one another; so that columns remain clear and distinguishable; so that figures, charts, graphs, and diagrams remain readable and legible; and so that the page is not cluttered with calculations that become undecipherable.

Understanding of number concepts can be made meaningful to blind children through play techniques as well as through sound and touch activities.

Learning arithmetic through games

Recreational activities involving measurement, counting, and using geometric forms

For example, dropping marbles into a jar is a counting game which children enjoy; blocks and rods are helpful in introducing number combinations through tactual stimulation. As blind pupils gain more of a mathematics foundation from games and tactual methods, it becomes possible for them to do more and more oral work. This will help not only as they progress to complex mathematical processes, but in real-life situations as well.

Most of the concrete materials such as counting frames, fractional parts, and the abacus, used in the regular class, can be used to advantage by the blind child. The blind child can easily manipulate the classroom model, or he can have a duplicate at his own desk. He writes examples with a braillewriter, following the same format as the print examples, whenever possible. This provides the blind student with a permanent record of his work. In the regular class, it may be more convenient to use a slate instead of a braillewriter. Blind students also make extensive use of Brannan and Taylor slates. These provide him only with a temporary record of his work, but allow him to correct his mistakes easily. Other devices used by the blind student in his mathematics work include, among other things, braille rulers, compasses, protractors, the Mitchell geometric figures, brailled graph paper, and raised-line drawing kits.

SCIENCE

The resource teacher assists visually handicapped pupils in various aspects of the science curriculum. She provides remedial instruction; prepares materials in large print or Braille, if needed; helps the student to use audio aids and reference materials; helps him with assignments on committee projects, scientific models, charts, and diagrams; and previews experiments and equipment to be used so that the visually handicapped pupil will not be confronted with a totally strange situation when this topic or experiment is taken up in the regular class. The resource teacher may review experiments with the student by means of an oral explanation or enlarged or brailled diagram. This procedure is especially beneficial to the blind pupil.

Whenever possible the resource teacher may suggest to the science teacher how a simple modification of materials or procedures can benefit the blind pupil without affecting the purpose of the experiment. For example, in demonstrating how an electric circuit works, the teacher may connect bells rather than lights.

SOCIAL STUDIES

Visually handicapped students, like their normally-sighted classmates, must master certain skills and concepts in social studies. For those who require it, large-print materials are available. Although the identical textbook (in use in a particular class) may not always be available in a large-print or braille edition, comparable texts usually are. Useful audio aids, a fruitful source of supplementary materials, are in abundant supply. Teacher-made, as well as commercially-prepared tapes are useful as are talking books and appropriate radio and television programs.

In the area of social studies, considerable emphasis is commonly placed on experiential activities including such things as going on trips to places of interest, attending special demonstrations or lectures, interviewing people, visiting commercial exhibits, participating in class projects and group discussions.

Map work may present problems to many visually handicapped pupils. Some maps are too detailed to be conveniently read by these pupils. The resource teacher may order commercially-prepared maps that are enlarged and clear with relatively few details and with simple contrasting color combinations. If not commercially available, the resource teacher may enlarge maps, illustrations, charts, posters, diagrams, cartoons, and graphs as needed. Teacher-made materials may be prepared to meet specific situations. For example, she may make sectional maps, topical maps, or outline maps. When studying colonial history, it may not be necessary to use the map of the entire United States. A map of the thirteen original colonies might be preferable for the unit under study. Globes too should be clear and easy to read.

Resource room research—large-print encyclopedia and large globe

For the blind pupil the braille map should be as simple as possible. If feasible, it should attempt to present one idea only by eliminating unnecessary detail. The teacher or the blind pupil may apply clay to a map as a means of differentiating the various areas.

Three-dimensional (embossed) relief maps are especially helpful in illustrating elevation (altitude) and topography. Similar to other regular maps and globes, the embossed types can help reinforce the geographic ideas pertaining to latitude, longitude, and distance relationships. They can also be used to clinch the concepts of rotation, revolution, seasonal change and time differences. These aids are useful in current events discussions as well as in other areas of the curriculum.

Tape or cord may be used in tracing routes, rivers, boundaries, etc. Special tape may be used for Braille labels.

When blind children are prepared in advance in the resource room, they understand more clearly the discussion of these topics in the regular classroom.

Many visually handicapped pupils illustrate projects and reports by using maps and models which are available to them.

FOREIGN LANGUAGE

The audio-lingual approach to foreign language study is particularly well suited to visually handicapped students. For those pupils following a language laboratory course, the resource teacher may borrow or duplicate tapes for reinforcement of learning. Effective use of the tape recorder in the resource room can help the visually handicapped pupil gain facility in foreign language study. By listening and repeating good language patterns, then by recording and listening to his own voice, he notes where correction and more practice is needed.

The tape recorder for listening and recording

Though audio-lingual skills now receive greater emphasis than in the past, skills in reading and writing as well as familiarity with the literature and culture of a foreign country are also important aspects of the foreign language program.

MUSIC

The visually handicapped pupil takes part in the music program of his regular grade. This may involve singing, choral work, dramatizations, listening to music, instrumental work, music appreciation, and discussions. The resource teacher encourages her pupils to join the glee club, the band, the school

Visually handicapped students in high school art class

phases of the art curriculum should be a matter of consultation between the resource teacher and the art teacher. Modeling with clay, for example, provides the student with tactile satisfaction and an opportunity to learn more about line, form, and texture. Fashioning three dimensional arrangements from assorted paper, cardboard, cloth, etc., gives the visually handicapped pupil an opportunity to use his judgment in selecting various sizes, colors, textures, and weights from the materials available. Ceramics, sculpture, and gross line work are all art forms which the visually handicapped student works at successfully. Although the functionally blind pupil does not perceive color, he knows that it exists from what others say about it, and he enjoys being stimulated tactually through work with crayons, easel painting, and finger painting.

Mentioning these specific areas which appear to be especially adaptable to the needs of visually handicapped pupils does not mean to imply that other aspects of the art program should be closed to them. Some visually handicapped pupils do well in all forms of art.

Visually handicapped students, like others, derive enjoyment from art both as spectators and as performers. Field trips to art galleries, museums, etc., can help in broadening and developing the attitudes and background of children whose range and variety of experiences have been limited.

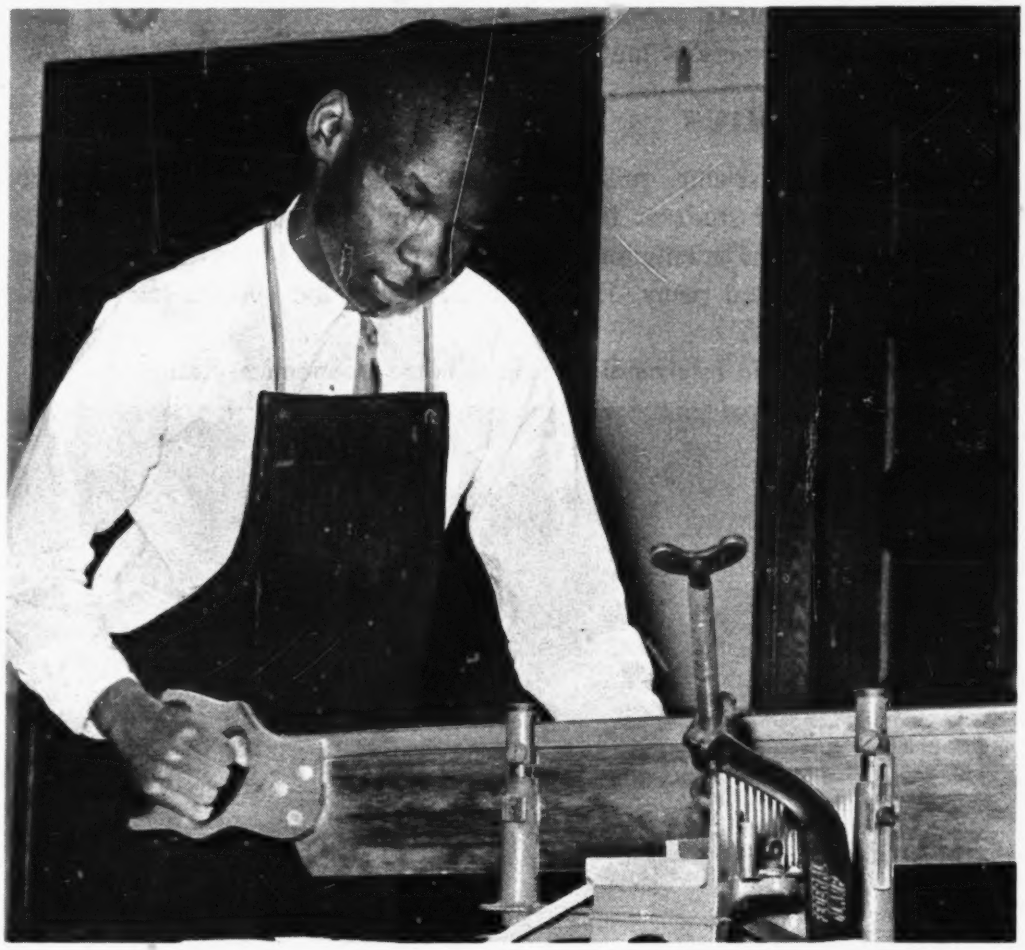
8

INDUSTRIAL ARTS

Industrial Arts is that phase of general education which develops knowledge, skills, understanding, and appreciation of our industrial civilization through experiences in wood, metal, ceramics, graphic arts, electricity, and craft media coupled with readings, research, and discussions. Visually handicapped students benefit from participation in such activities.

The resource teacher informs the industrial arts teacher of the capabilities of the visually handicapped student and they agree on the types of activities to which each student should be exposed. It is best that there be a well-rounded exposure. Because of the great variation in visual handicaps, some students may be able to participate fully in almost any phase of the Industrial Arts program, while others may be more limited. Some need no substitution or modification of projects, while others may require assistance in a particular operation, or extra drill in the use of some tools. Those students who wear glasses, wear safety goggles over their own glasses during shop activities.

Blind student in industrial arts class



Functionally blind students should also be given the opportunity to participate in the Industrial Arts program. If they are given a model of the project to be done, they can follow clear, specific instructions in constructing it. In this activity raised-line drawings of the plan of the project may be used by the blind students. They can be expected to measure and cut the required materials, using either braille equipment or the regular tools.

Before starting, they, like all other students, should be trained in the uses and functions of the tools they will handle. Every tool should be in a specific place so that blind students can select those they need without any problem. When an open panel tool board is used, a cut-out of the shape of the tool is a guide to proper tool replacement.

A reliable buddy might be assigned to a blind student to help orient him to the shop as well as to the equipment in it and to explain or help him with some operations.

The resource teacher or Bureau supervisor may be consulted for suggestions on procedures and for the feasibility of assigning certain projects, if doubts exist in the mind of the industrial arts teacher.

Of course, visually handicapped students are trained to master and observe the safety practices taught to all students.

HOME ECONOMICS

Homemaking, sewing, millinery, and cooking are activities in which visually handicapped students take part profitably. Here too some students may require additional orientation or drill in a specific skill in order to progress with their fully-sighted peers. In consultation with the subject teacher, the

Visually limited girl in intermediate school home economics class

Blind high school girl in home nursing class

resource teacher can be of assistance in determining what modifications, if any, may be employed. It should be pointed out that myopes, in particular, do very well in close work.

HEALTH EDUCATION

Visually handicapped students should take part in most of the physical activities planned for normally-sighted pupils unless these activities are specifically limited or qualified by medical recommendations. The health education teacher can observe these limitations and still provide each pupil with useful activities to perform within the framework of the regular physical education program. Indeed, the general rule to follow is to allow all pupils to participate in the normal activities of their classmates with a minimum of adaptation consistent with their needs.

In the early primary grades, song plays, circle games, and rhythms are appropriate for the visually handicapped pupil as well as the normally-sighted. The folk and square dancing and squad games are especially suitable for coordination of body movements. In the intermediate and secondary schools, visually handicapped students participate in calisthenics, group games, swimming, knock hockey, foul shooting, running, wrestling, dancing, and even ball games as well as the variations which are played in school gymnasiums. The use of plastic goggles is recommended for students who need their glasses when engaged in physical activities.

The visually handicapped student is given health instruction with his regular class. In intermediate and secondary schools he is programed for hygiene as all students are. The fact that he is assigned to regular health education and hygiene classes makes certain that he is included in the medical services which all students receive. These services include immunization against various diseases, dental screening and follow-up by a Department of Health hygienist, audiometer test, medical examinations as needed, and other services that are scheduled from time to time. If, for any reason, a visually handicapped child does not regularly attend his health education class, then the resource teacher should make certain that he, nevertheless, secures the medical services which are normally scheduled through the health education class.

When a functionally blind pupil participates in physical activities, a sighted buddy acquaints him with the principal parts of the gymnasium and

Blind students participating in physical activities

DEPTH 4 FEET

Blind girl in H.S. health education class

the location of the equipment. The blind boy or girl has no trouble following a teacher's directions for performing calisthenics. Adaptations may be made which will allow the blind student to take part in some organized games. For example, in punch ball he can hold the ball in one hand and punch with the other. A sighted buddy may run with him to first base.

It has been found that blind students can benefit from a corrective health program in those high schools where such a program is available.

ENRICHMENT AND CORRECTIVE EDUCATION PROGRAMS WITHIN THE SCHOOL

The visually handicapped child participates in all programs available to the non-handicapped children in the school. The policy is to provide every visually impaired child the advantages of a total educational program as prescribed by the New York City Board of Education.

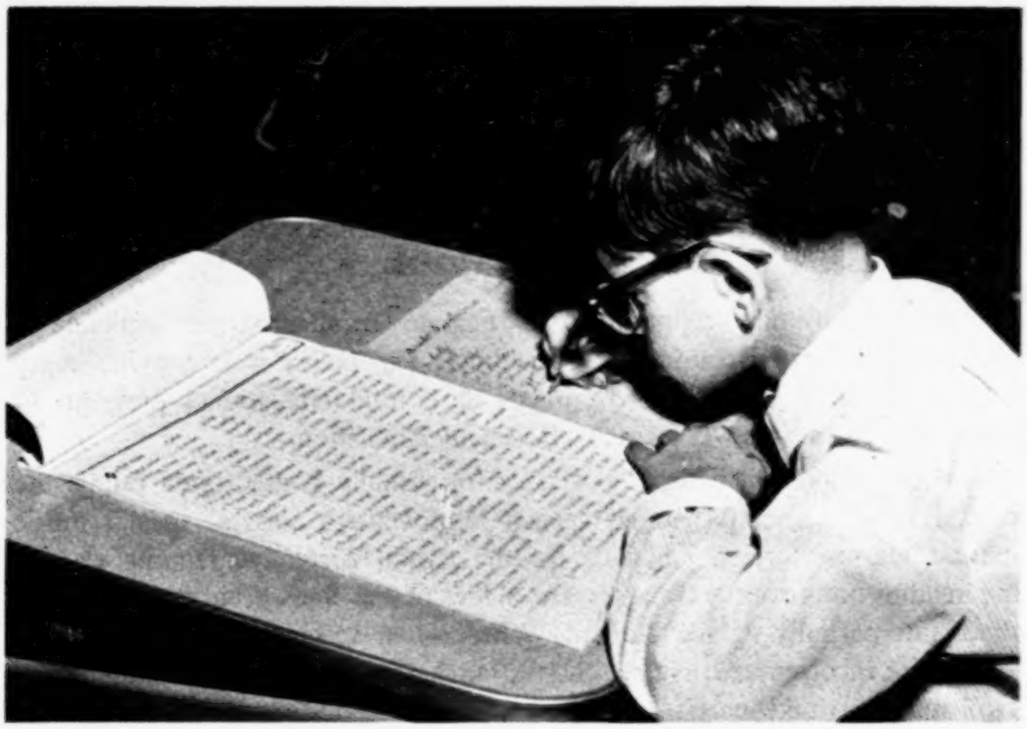
Many schools in which the classes for visually handicapped pupils are located have special programs; speech improvement classes, special music and art classes, foreign language for the gifted, corrective reading classes, and reading improvement classes are a few of the fine services open to the blind and partially-sighted student. Where team teaching and after school centers are incorporated in the school's curriculum, the visually handicapped pupil may also take part.

TESTING

The visually handicapped student participates fully in the testing program. He takes all of the examinations given to his classmates, including schoolwide tests, class tests given by grade or subject teachers, City-Wide Tests, Regents Examinations, scholarship tests, Preliminary Scholastic Aptitude Test and Scholastic Aptitude Test, and the standardized achievement and Iowa Tests given on a city-wide basis. Some visually handicapped pupils can and do take their tests with their classmates. For those who require special provisions, the resource teacher handles the administration of the tests. Special provisions may include such things as an extra time allowance; brailled or large print copies of the examinations; use of braillewriter, magnifiers, or other devices; and dictation of all or part of the test.

City-Wide Tests, Regents Examinations, Regents State Scholarship Examinations, Preliminary Scholastic Aptitude Tests and Scholastic Aptitude Tests, Metropolitan Achievement Tests, the Iowa Tests, and others are made available in both large print and Braille to those visually handicapped students who need them. The resource teacher requisitions, through the Bureau for the Education of the Visually Handicapped, the number of large-print and Braille copies she needs of the City-Wide Tests, the Metropolitan Achieve-

Visually limited student taking enlarged standardized test



ment Tests, and the Iowa Tests. She orders Braille and large-print Regents examinations through her school office. She contacts the Educational Testing Service in Princeton, New Jersey, directly, for the required forms of the Preliminary Scholastic Aptitude Test and the Scholastic Aptitude Test. The resource teacher makes suitable arrangements with the subject or grade teacher for administering class tests and with the school administration for school or uniform examinations.

EXTRA-CURRICULAR ACTIVITIES

Extra-curricular activities are just as important for visually handicapped students as for others in developing hobbies, in providing recreational activities, in offering opportunities for socialization, and in helping students improve skills in areas of special interest. Consequently, resource teachers encourage their pupils to participate in the mainstream of school and community activities. Visually handicapped students engage in sports, join clubs, student councils, dance classes, dramatic programs, orchestra, band, and chorus. The only limitations on the activities of visually handicapped students are those recommended by the eye specialist.

As contributing members of the various organizations they acquire actual experiences in human relations and in special interest areas. The social interchange with their non-handicapped peers develops a mutual understanding in all young people.

TRIPS, EXCURSIONS, AND LEISURE-TIME ACTIVITIES

Visually handicapped pupils go with their classmates on trips and excursions planned for the regular class of which they are members. Such activities are of particular value to visually handicapped pupils because they need the wide range of experience that trips provide. If the feasibility of taking a visually handicapped child on a particular trip is questioned, the resource teacher should be consulted.

Visually handicapped students are also encouraged to take advantage of their local recreational facilities which are sponsored by community agencies. Some agencies have special programs devoted to visually handicapped youth. The resource teacher helps students to explore the available opportunities within their neighborhoods for after-school activities as well as those offered by agencies operating on a city-wide basis. Other leisure time activities are fostered through the pupil's participation in curricular as well as extracurricular programs.

V

Guidance and Supplementary Services

THE ROLE OF THE BUREAU GUIDANCE COUNSELOR

Guidance and the relationships developed between the visually handicapped student and the counselor are of prime importance in the development of the student and in the setting up of realistic goals. The guidance counselor assigned to the Bureau to work solely with visually handicapped students shares with the guidance counselor in the school the responsibility of offering guidance services to visually handicapped students. The latter should be as familiar with the visually handicapped children in his school as with all of the other students assigned to him. Therefore, it is advisable that a close working relationship be established between the Bureau counselor and the school counselor regarding the needs of blind and partially-sighted students.

One of the principal functions of guidance is the counseling of individual pupils, and the aims in this area are the same for the visually handicapped as for the normally-sighted. In addition to the general aims applicable to all students, there are specific aims for the guidance of the visually handicapped pupils. They are as follows:

1. To assist the visually handicapped child to evaluate himself in terms of his assets, rather than in terms of his handicap
2. To acquaint the visually handicapped student with the services of specialized agencies, and to encourage him to use them fully.
3. To encourage the visually handicapped student to assume his full share of responsibility for his total education without excessive dependence upon others
4. To recommend to the visually handicapped pupil that he take periodic health examinations.

The guidance counselor assigned to the Bureau for the Education of the Visually Handicapped has the responsibility of working in depth with visually handicapped students and their families. He shares the knowledge of plans, goals, and implementation thereof with the school guidance counselor as well as with the resource teacher. Often the resulting exchange of information, ideas, and suggestions serve to improve the student's chances for achieving his goals.

The counselor assigned to the Bureau visits schools to confer with resource teachers, principals and administrators, school nurses, and grade advisers as well as the school guidance counselor. He interviews pupils, individually and in groups, to ascertain their personal goals, to advise them, and to determine the requirements on which they will have to focus their attention in order to attain their aims. He interviews parents individually to help them understand the potentialities as well as the limitations of their children. The Bureau counselor also serves as a liaison person. As such, he is in contact with specialized agencies, with hospitals and clinics, with psychologists and social workers, and with all teachers who have contacts with visually handicapped children. He works closely with the personnel in rehabilitation agencies, particularly the Vocational Rehabilitation Service (VRS) of the New York State Commission for the Blind and the Division of Vocational Rehabilitation (DVR) of the New York State Department of Education. From such agencies he secures services that may include psychological testing, family counseling, examination in low-vision lens clinics, home visits, training in daily living skills, and provision for recreational activities.

The guidance counselor does not have the sole responsibility for carrying out the foregoing aims. Educational personnel who share this responsibility include the resource teacher, the regular or subject teachers, the Bureau supervisors, the school administrators, the school nurse, and, of course, the guidance staff in the school. The Bureau counselor may organize meetings among various members of the school staff, Bureau personnel, and specialists in the field of the handicapped in order to impart information that may help with the adjustment of the visually handicapped student. These meetings offer an opportunity for educators as well as agency personnel to exchange information, to discuss individual students, and to explore recommendations suggested.

One very important aspect of guidance for the visually handicapped students on the senior high school level is that they be informed of the services available to them through the two state rehabilitation agencies—the VRS for the legally blind and the DVR for the visually limited students. Referrals from the schools to these rehabilitation agencies are expedited by the Bureau counselor with the cooperation of the resource teachers. Frequent contacts are maintained by the Bureau counselor with rehabilitation counselors regarding plans being drawn up for either the higher education or vocational training for those students who are active with the rehabilitation agency. Copies of the summaries based upon the summer evaluation and training sessions, as well as case reports of counseling interviews of students by rehabilitation counselors, are sent to the Bureau counselor who in turn shares and discusses them with Bureau Supervisors and the resource teachers involved.

THE RESOURCE TEACHER'S ROLE IN GUIDANCE

The resource teacher of the visually handicapped student is a key person in any guidance program. While the techniques employed by the teacher may vary to some degree depending upon the age and maturity of the students in her class as well as upon the nature of their visual status, the basic principle of guidance will remain the same regardless of the level of the school. Understanding each child and developing a warm and wholesome relationship with the student is vital. Acceptance of the student at the level at which the teacher finds him and the way she uses the resources at her disposal to advance his progress are basic to the development of empathy. Identification of and provision for the slow learner, the underachiever, the potential dropout, the socially and culturally deprived, and the gifted child as well as the average achiever are essential if the individual is to be well motivated.

Blind students in particular, and visually limited students to a lesser degree, must be helped to accept the fact that they will need more assistance both in school and at work than will their normally sighted peers. They should be encouraged to capitalize upon their abilities and talents and to make the most of whatever aids are available.

Guidance of the visually handicapped student is a continuing process throughout his school years and for years after. In this entire process, the resource teacher plays a leading role. She, above all other educators, knows the student best — his strengths, his weaknesses, his skils and abilities, his interests and hobbies, his out-of-school activities, and his accomplishments. She is in a unique position, because of her close and often individual contacts in school, to assist the visually handicapped student in all aspects of his school career. The teacher of the visually handicapped student will confer with school personnel and will assist in his class placement and with school work. She will also keep in touch with the Bureau counselor or Bureau supervisor regarding any special problems which may arise.

A good parent-teacher relationship, as in all school situations, is vital to the education of the student. The teacher may, through parent interviews, elicit information that may often lead to beneficial results in the school situation. In some situations, however, it may become apparent that additional help must be sought to overcome difficult and long standing problems. In these instances the teacher will seek aid from the school and Bureau personnel.

ARTICULATION WITH OTHER SCHOOL LEVELS

As the child moves on from one level of the school system to the next, the resource teacher can render useful service in paving the way for his advancement by providing information which will be helpful to the new school. The school articulation card prepared by the resource teacher in the sending school will give pertinent data useful for programing the student in the new school. Nor is she limited by the information requested on the card. Additional material may be recorded on the reverse side of the card. On the basis of the information obtained from these articulation cards and from interviews, the supervisors and the counselor are able to determine proper placement for the student.

All matters relating to the placement and programing of the multiply handicapped blind child are determined by the supervisor in charge of this program.

AGENCIES AND OTHER BUREAUS

The Bureau for the Education of the Visually Handicapped utilizes the agencies giving service to the blind and partially-sighted students as well as other agencies serving all students. These include family and social service agencies concentrating on problems revolving about home and family life, child welfare agencies which safeguard the basic needs of all minors, rehabilitation agencies specializing in physical and vocational rehabilitation, educational clinics directed to determining and remedying the causes of school failure, psychological clinics engaged in psychological testing and screening, and general health agencies.

Additional services are provided by other bureaus of the Board of Education. For example, the Bureau of Child Guidance specializes in screening and studying children with learning and emotional problems. The Bureau of Attendance enforces the Compulsory Attendance Law and handles the problems presented by the families of children registered in school but not attending. The attendance teacher endeavors to resolve such problems. However, in a few instances, these situations may only be resolved through petition in Family Court.

The Bureau for the Education of the Visually Handicapped works closely with all bureaus in the Office of Special Services as well as subject bureaus.

Visually handicapped children are also accepted in Junior Guidance Classes, classes for the socially maladjusted, classes for physically handicapped children, classes for children with retarded mental development, etc., and children so placed are given itinerant teacher service by the Bureau for the Education of the Visually Handicapped.

The Bureau guidance counselor, to be effective in his role, must not only be thoroughly familiar with the above agencies and bureaus, but he must also establish and maintain a good working relationship with their professional personnel.

AGENCY RESOURCES AND VOLUNTEER SERVICES

The Bureau maintains close contact with those private agencies and volunteer groups serving visually handicapped children and youth. Often these services supplement and complement the activities of the Board of Education and the Department of Health. For example, the ophthalmological and optometric personnel of private agencies are called upon to clarify reports on eye conditions, to examine students, to recommend low vision optical aids, and to follow up specific cases.

Both agency resources and volunteer groups render valuable service in enlarging, brailling, and duplicating materials to be used by students. Recordings, tapes, and tangible apparatus are also obtained for students, whether these materials are to be used in the classroom or at home. Some volunteers work at the Bureau office duplicating and binding braille books.

Private agencies organize and carry on activities from which visually handicapped students derive benefit and enjoyment. In addition, private agencies provide ancillary and auxiliary services to these students, such as diagnostic studies, low vision evaluation, training in cane travel, music instruction, recreational programs, camping, nursery school, and instruction in skills of daily living. Family counseling, pediatric examinations, psychiatric evaluation, and therapy are arranged if there is a need. Referrals for all these services are made by Bureau personnel or by the parents of these students.

(Public agencies are discussed in the section, "Guidance and Supplementary Services".)

Volunteer duplicating braille material on thermoform machine

VI

Administration and Supervision

The Bureau for the Education of the Visually Handicapped is primarily a service bureau, providing supportive and auxiliary services to schools in which a program for visually handicapped children exists. The school administrator and the district superintendent are the rating officers of individual resource teachers. The Bureau director and supervisors visit schools to cooperate and consult with school personnel, to meet with parents, and to advise pupils.

RESPONSIBILITIES OF THE SCHOOL ADMINISTRATION*

The school administration shares with the Bureau for the Education of the Visually Handicapped the following responsibilities:

1. to see that the resource program functions at its optimum
2. to make regular class assignments for the pupil's placement in the regular grade or subject classes
3. to provide supervisory help for the resource teacher
4. to see that the resource teacher is included in all curriculum training programs
5. to see that the resource teacher's needs and requisitions for books, materials, and equipment are properly met and processed
6. to see that the needed services are provided for the visually handicapped children whether such services are available within the Board of Education or from outside agencies
7. to consult with the Bureau director and supervisors when organizing a new resource class in the school.

ROLE OF THE BUREAU SUPERVISOR

The resource teacher and the principal of the school in which the resource program is conducted are aided by a Bureau supervisor whose role is advisory and supportive. The supervisor does not rate the teacher. This is a function of the principal. The supervisor does everything possible to aid the resource teacher who is working with the students, to bring about improvement in instruction, and to maintain and improve conditions which are necessary for effective learning. In particular, he undertakes the following activities:

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*For additional responsibilities, see the following section, "Role of the Bureau Supervisor."

A. Consultative Services

1. makes himself available for consultation with the resource teacher, principal, and/or other school personnel
2. offers suggestions regarding programing
3. helps evaluate student programs and suggests remedial work within the school program
4. suggests class placement
5. discusses and suggests techniques to be employed by regular teachers and the resource teacher
6. assists teachers and principals with problems arising from the home situation
7. conducts such group meetings and conferences as are deemed appropriate
8. serves as a consultant to regular school personnel on the education of visually handicapped children

B. Supervisory Services to Resource Teacher

1. observes the resource teacher in action
2. helps in the orientation of new teachers
3. helps the resource teacher adapt educational materials and teaching procedures to the needs of visually handicapped students
4. assists the resource teacher with the selection of special equipment, materials and books, and facilitates the procurement of special supplies that are needed
5. advises the resource teacher on requisitioning procedures
6. helps the resource teacher to analyze the visually handicapped pupil's behavior, to recognize his special needs, and to provide for them
7. advises resource teachers on administering diagnostic and achievement tests

C. Services to Pupils

1. promotes those goals which will be of benefit to the student so that articulation with each succeeding school level will be made smoothly
2. arranges for the timely admission, transfer, and discharge of students where possible
3. obtains the aid of the Bureau guidance counselor and of rehabilitation counselors in cases requiring their attention
4. assists in solving transportation problems
5. helps screen pupils for possible placement or discharge from one of the programs in the Bureau for the Education of the Visually Handicapped
6. confers individually with visually handicapped pupils, when neces-

sary, in an effort to assist them in their educational, physical, emotional, and social development

7. reviews, interprets, and follows up, where necessary, the results of eye examination reports received from the Department of Health
8. discusses with the Department of Health consultant ophthalmologist in charge of class placement those cases which require special consideration
9. draws educational inferences from medical, psychological, and social worker reports
10. works with the resource teacher and public health nurse in keeping students up-to-date on eye examinations
11. helps teachers and parents obtain information and assistance from clinics and agencies

D. Liaison wtih Agencies

1. suggests agencies and services which might benefit the students
2. maintains liaison with the staffs of special agencies so that the status of their clients' progress is known, and in turn, evaluates their reports in terms of educational implications
3. assists in acquiring volunteer help for brailling and enlarging materials
4. consults with personnel of other areas of special education on cases of multiply handicapped children
5. advises and helps the resource teacher in processing referrals of students to agencies

E. Professional Growth

1. helps in the continued professional growth of both new and experienced resource teachers
2. evaluates new trends and data from the available literature and research
3. attends, participates in, and reports on professional meetings, conferences, conventions, and workshops to acquaint himself with and pass on to teachers the latest trends as well as research in special education
4. assists and encourages teachers to prepare for promotional opportunities

F. Administrative Duties

1. helps the director, principals, and other administrators organize new resource classes as required
2. consults with the Bureau director on unmet needs
3. arranges for administering the city-wide testing program to visually limited and blind children

4. investigates new programs of instruction and the feasibility of their use with visually handicapped children
5. reviews, records, and audits expenditures for pupil transportation
6. arranges for the brailling, enlarging, and recording of needed books

ADMISSIONS, DISCHARGES, AND TRANSFERS

After examining a pupil, the ophthalmologist or optometrist completes the Department of Health eye examination report form (E12S)* and forwards it to the consultant ophthalmologist in the Bureau for Handicapped Children either directly or through the school nurse. The consultant ophthalmologist of the Department of Health reviews the report of the original examiner and makes appropriate recommendations for placement. It may be necessary for the consultant ophthalmologist to confer with the examiner and/or the Bureau supervisor prior to making any recommendation. This recommendation is recorded on the E12S and sent to the Bureau for the Education of the Visually Handicapped. Here a Bureau supervisor examines all the available information concerning the student and arranges for the proper educational placement. Where placement of a visually handicapped child in one of the Bureau's programs is not indicated because of failure to meet placement criteria, the case is referred for service and placement to the appropriate bureau.† In such instances, itinerant teacher service will be provided to any public educational setting to which the pupil may be sent.

A discharge from the program follows the same procedure after an approved E12S indicates that such placement or service is no longer required.

Transfer of visually handicapped pupils from one resource class to another is initiated when students are promoted to a higher educational level or when they move from one area to another. Final authorization for class placement, transfer, and discharge from any program for visually handicapped children comes from the Bureau for the Education of the Visually Handicapped.

THE ROLE OF THE SCHOOL HEALTH SERVICE

The school nurse and the resource teacher maintain close contact in order to obtain appointments from both public and private sources for eye examinations and reports on visually handicapped pupils. The eye examination report form (E12S) is the official reporting document of the Department of Health.

The nurse records on the pupil's health cards, all the data obtained.

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*The E12S can be obtained at the school medical office, at Department of Health Eye Clinics or from the resource teacher.

†Possible placements and the reasons therefor are stated in the section on the "Itinerant Teaching Service."

The resource teacher records all the information on each pupil's vision card which is furnished by the Bureau.

The E12S is forwarded to the Bureau for Handicapped Children of the Department of Health either by the nurse when she receives it or directly by the eye specialist who examined the pupil. At the Bureau for Handicapped Children the consultant ophthalmologist reviews each E12S. This procedure is followed for every eye report of students receiving service from the Bureau for the Education of Visually Handicapped, of students being recommended for service, or of students whose service is to be discontinued.

The latest E12S is kept on file in the office of the school nurse with the student's permanent health card.

It is advisable for both teacher and nurse to meet with parents who require guidance and information concerning the need for eye examination reports and to counsel them, when necessary, concerning the findings and recommendations of the eye specialist. If a home visit is indicated, the resource teacher refers the request to the nurse.

PUPIL TRANSPORTATION SERVICE

Visually limited children who have been assigned to a resource class in an elementary or intermediate school and who live more than one half mile from such schools are provided with transportation from home to school and return by the school bus service which is under the administration of the Bureau of Pupil Transportation of the Board of Education. Blind children receive door-to-door transportation to and from school regardless of distance between home and school.

Some children, especially those who are more mature, independent, and capable, are able to travel between home and school via public transportation. They are encouraged to do so, providing parental consent is obtained. The Bureau of Pupil Transportation issues tickets to these students enabling them to use public transportation facilities at no cost.

Bureau supervisors, through direct contact with the Bureau of Pupil Transportation, make whatever travel arrangements are required in each case. When a pupil is recommended for admission to a resource class, the Bureau supervisor involved determines whether or not this child will require transportation to the school in which placement will probably be effected. He then contacts the Bureau of Pupil Transportation to determine the geographical appropriateness of the school to which this pupil is to be sent. After agreement has been reached, the supervisor has the admission or transfer papers sent to the parent, the receiving school, the sending school, and the Bureau of Pupil Transportation. The latter accepts such notification as authorization for placing the pupil on its transportation list.

Bus transportation for visually limited pupils

Removal of a pupil from the transportation list follows a similar procedure. The Bureau supervisor notifies the Bureau of Pupil Transportation that service for a particular pupil is no longer required when such pupil has been discharged from the program; when such pupil has, with parental consent, been given permission to use public transportation; when the pupil has gone on to high school; when this pupil is placed on itinerant teaching service. Such change is officially effected when the Bureau notifies the parent, the schools involved, and the Bureau of Pupil Transportation.

REGISTRATION OF THE LEGALLY BLIND

Each year legally blind students in the New York City school system are reported to the Bureau for Handicapped Children of the New York State Education Department. The Bureau for the Education of the Visually Handicapped compiles these data. The visual status of all legally blind students is recorded for statistical and financial reasons.

Federal funds, depending upon the number of legally blind students reported, are allocated to the state which in turn credits them to the quota account which the Bureau for the Education of the Visually Handicapped has with the New York State Department of Education. This account is used by the Bureau for the purchase of textbooks, supplies, tangible apparatus, and recorded aids to learning from the American Printing House for the Blind. Requisitions for these materials from this source are handled through the Bureau office.

REQUISITIONING SUPPLIES AND TEXTBOOKS

Primary and intermediate schools having visually handicapped students receive an annual per capita allotment. Senior high schools receive an annual class allotment. These funds are used for the ordering of Board of Education list and non-list supplies, textbooks, and tangible apparatus. Requisitions originate in the school at the request of the resource teacher with approval of the principal.

Orders for additional supplies, textbooks, and tangible apparatus are administered by the Bureau through its quota account in Albany with the American Printing House for the Blind. Materials are also obtained through special allotments to the Bureau from the budget of the Office of Special Services of the Board of Education. Resource teachers consult with their supervisors for suggestions regarding supplies, books, and equipment. The Bureau can also obtain specially adapted furniture through the Office of Special Education and Pupil Personnel Services.

REPAIR OF SPECIAL EQUIPMENT

Repairs of audio-visual equipment are handled through the Bureau for Audio-Visual Instruction.

Repairs of typewriters are handled through the school and paid for by school funds.

Braillewriters in need of repair are sent by the resource teacher to the American Printing House for the Blind after notifying the Bureau which makes arrangements for payment through its quota account.

VII

Medical Aspects

COMMON EYE CONDITIONS

The following is a list of the most common eye conditions found in visually handicapped children in the program. To enable the teacher to understand these conditions better, a short description of each follows.

ALBINISM is an hereditary condition in which the pigmentation of the eyes is either partially or totally absent. This alteration of the retinal pigment may produce varying amounts of visual disability. The usual form of albinism produces nystagmus, photophobia, and visual acuity between 20/70 and 20/200. These children usually adjust well to their visual limitation, but often require the added resources of the classes for children with limited vision. They frequently have refractive errors and are often helped by the use of visual aids. The pathology in these cases remains static and they usually do very well visually in school.

AMBLYOPIA is impaired vision without visible ocular pathology. The most common cause is strabismus. The amblyopia related to strabismus is treated by patching the good eye to force the child to use the amblyopic eye. The vision in the amblyopic eye is usually 20/70 to 20/200 and would ordinarily require the use of enlarged print. However, the total duration of patching is usually only a few weeks with vision improving to regular class level within the first two weeks. It is not worthwhile making the transfer to the class for children with limited vision for such a short period of time. In addition, the added stimulus of forcing the child to read regular print with the amblyopic eye brings improvement in acuity much more rapidly than enlarged print would. Regular class placement is therefore part of the treatment. Occasionally, itinerant teacher service is helpful in assisting the regular class teacher in these cases.

ANIRIDIA, or absence of the iris, is an hereditary condition. This condition is frequently associated with severe glaucoma and loss of vision. The children need to be constantly checked by their ophthalmologists.

ASTIGMATISM is a condition in which the power of the eye is not equal in all meridians. The necessary correction supplied by glasses must equalize the power of the eye in all meridians so that a clear, distinct image is focused on the retina. The type lens necessary to do this is a cylinder which may be used alone or in combination with a sphere.

Astigmatism as an isolated cause of poor vision requiring special placement is uncommon. This type of refractive error is more frequently associated with another diagnosis which is the primary cause of the visual defect. Therefore, an understanding of astigmatism is important for a total comprehension of the many ocular problems present in the visually limited child.

Cataracts, Congenital (congenital cataracts) consist of lens opacities of varying degree present from birth. If the opacity is severe enough to impair vision seriously, it may be necessary to operate and remove the opaque lens. If such surgery has been performed, it is necessary to provide a bifocal type spectacle correction for best vision—distance and near. Occasionally, the condition is complicated by the presence of retinal pathology and nystagmus. Later, complications such as retinal detachment and glaucoma may also occur.

The teacher, therefore, will encounter two types of children with this diagnosis: one type, which is not severe enough to have been operated on has a visual limitation of varying degree depending upon the amount of lens opacification. (These children will occasionally be on eye drops to dilate the pupil. The teacher should be aware of this.) The other type, with greater opacification, has had surgery and will wear an aphakic correction.

Chorioretinitis is an inflammatory condition involving the retina. It may be due to many causes and, depending on the area affected, may produce visual impairment. If the area involved is central, visual acuity is markedly impaired; if it is peripheral, there is little visual involvement. In the active phase of the condition the child may need extensive medication. After this acute phase has subsided, the eyes may be entirely healed with only some residual damage to the retinal structure.

Coloboma is an hereditary condition. This is a structural defect of the eye that impairs vision depending upon which part of the eye is involved. The involved area may be the retina, disc, macular, or iris. If the peripheral retina is involved, there is usually a mild field defect, but good visual acuity. These children do not require special placement. However, if the macula is involved, the central vision is affected and vision may be in the range of 20/200. Coloboma of the optic disc may also show field defects of varying degree, depending on the extent of the involvement. Coloboma of the iris and lens has no effect on vision. Colobomata are stationary and the prognosis for adjustment to the visual limitation is good. Visual aids are a great help in this type of case.

Glaucoma, Congenital is a condition of increased intra-ocular pressure which is present from birth. It is sometimes necessary for surgery to be performed to lower the increased pressure and prevent damage to the eye structures. The ocular damage may have been slight, but occasionally severe damage to the point of blindness may have occurred. These children should be under the close observation of an ophthalmologist for periodic pressure determination and may require eye drops to maintain control of the ocular pressure.

HYPEROPIA is a condition in which the refractive power of the eye causes the image to be focused behind the retina. This type of refractive error is very common in children and may be a completely normal finding. A small amount of hyperopia is easily overcome by the child and is usually not associated with a visual defect. Hyperopia may be an important associated finding of strabismus, amblyopia, and aphakia. In cases of strabismus, glasses are prescribed as treatment for the eye turn. The ophthalmologist usually recommends that the glasses be worn constantly even though the vision may be the same with and without correction. Occasionally a very high degree of hyperopia may be associated with amblyopia. These children may require placement in visually limited classes if the visual impairment is severe. In aphakia, a form of hyperopia is usually produced in which bifocal glasses must be provided to obtain clear vision for distance and near.

MACULAR DEGENERATION and MACULAR APLASIA are hereditary diseases that strike the central area first and may cause considerable visual impairment from the very onset of the disease. These children usually require special placement.

MARFAN'S SYNDROME is an hereditary condition. It is a combination of physical signs including dislocated lens and a tall body structure with long fingers and toes. The children are benefited by correction of their refractive error, which may be either myopia, if the crystalline lenses are in place, or aphakia, if the lenses have fallen away from the visual line of the eye. If given the appropriate glasses, they usually do very well. Physical activities should be curtailed to prevent disturbance of the position of the lens.

MYOPIA, by far the most prevalent condition found in children in the program, is a refractive abnormality in which the image is focused in front of the retina. This error may be completely corrected with glasses giving a normal acuity or there may be an associated retinal abnormality which causes poor vision even with glasses. In the past, it was felt by many people that extensive use of these myopic eyes could damage vision. However, most ophthalmologists now feel that the vision is improved by increased use of the eyes and that prolonged study is not harmful.

Some of these children should participate in restricted physical activities because of the danger of retinal detachment complicating the course of their eye condition. It is the responsibility of the ophthalmologist to indicate the appropriate restrictions in these cases on the E12S forms. However, this type of case does not constitute a majority of the myopia cases and most can participate in normal activities. Because of the borderline acuity and the tendency for visual function to improve, it is very important that these cases be re-examined at frequent intervals by their ophthalmologists. In this way the class placement can be accurately adjusted to the changing needs of the child.

NYSTAGMUS, or involuntary movement of the eye, is not usually considered a diagnosis, but is actually associated with many eye conditions such as albinism, retrolental fibroplasia, and congenital cataracts.

OPTIC ATROPHY. There are many conditions which give rise to optic atrophy or degeneration of the optic nerve. Congenital or hereditary optic atrophy may be observed at birth or later in life. Toxic or inflammatory diseases may produce optic atrophy at any age. Brain tumors may cause some optic nerve damage. These cases of optic atrophy require extensive diagnostic work-up to determine the cause and prognosis of the atrophy. If there is associated field loss as well as low visual acuity, the child will be hampered by low vision aids that magnify print. Prognosis is good if the condition is static and the child learns to adjust to the visual impairment.

RETINITIS PIGMENTOSA, an hereditary disease, is a degeneration of the retina involving the mid-periphery of the retina at the beginning and extending posteriorly as the condition progresses. It usually develops in early adulthood and may progress to complete blindness later in life. Most of these children, however, complete their education before the disease has advanced to this stage. The main difficulty in the early stages is visual field loss and night blindness. Special class placement is required only in the severe, far-advanced cases.

RETINOBLASTOMA is an hereditary ocular tumor usually involving both eyes. If the condition is caught early enough, the child's life may be saved by removal of the eyes. Occasionally it may be successfully treated with radiation in which case the vision may be saved. However, these children frequently have had bilaterial enucleations. If the child has reached school age, it usually means the condition has been adequately treated and prognosis is good.

RETROLENTAL FIBROPLASIA is an eye condition found in children who were premature infants and who received a high concentration of oxygen in the first few weeks after birth. This high oxygen level was believed to be necessary for the survival of these tiny infants. Research uncovered the relationship between a high level of oxygen and retrolental fibroplasia and has virtually eliminated the condition by regulating the amount of oxygen given. Enough oxygen is provided for the child's survival, but the level is held below the critical concentration that was found responsible for the eye condition.

The visual limitations in these cases may vary from mild retinal pathology to total blindness. For the past few years retrolental fibroplasia has been one of the most common causes of blindness in children. Approximately one half of the children in the Braille resource classes in this area have retrolental fibroplasia. The condition may be static with the damage being done in the first few weeks after birth, or it may be complicated by retinal detachment at a later date. If there is any residual vision, visual aids are very helpful in these cases.

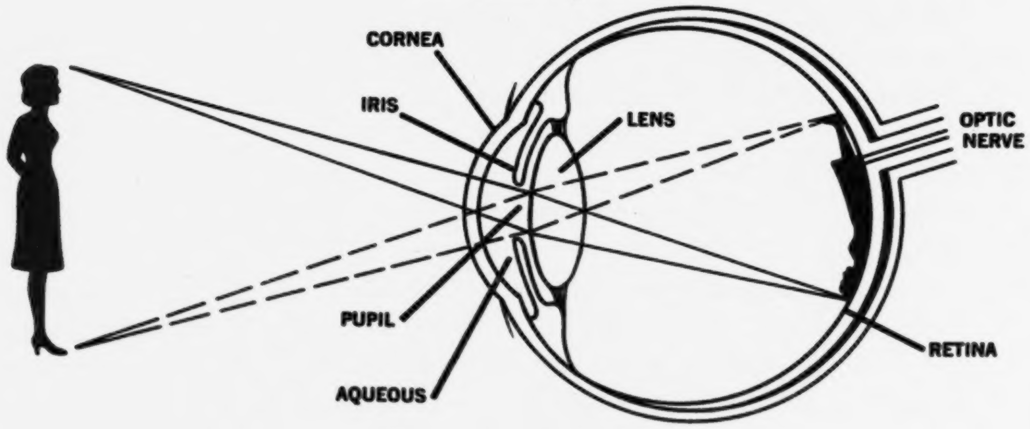
Retrolental fibroplasia will be seen less frequently in the future now that the cause is understood and necessary steps are taken to prevent its development.

HOW WE SEE

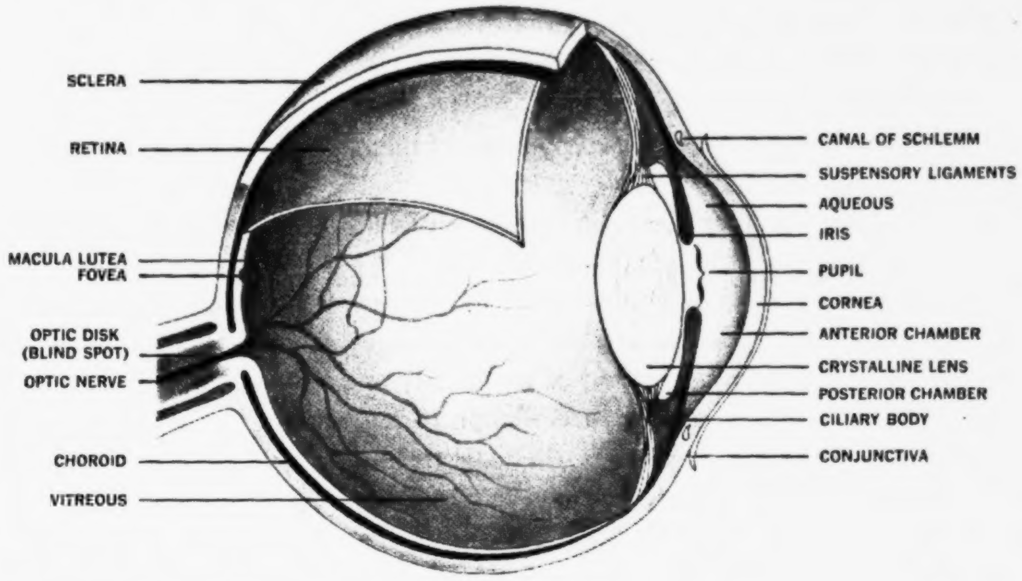
Vision is a function that requires more than the eye alone. In order for the eye to do its job completely, there must also be light to see by and the brain to define what is seen. As light strikes an object—a girl, for example—in a person's field of vision, the light rays are reflected from the girl to his eyes. The rays pass through the *cornea* or clear front window, the *aqueous* or watery liquid behind the cornea, the *pupil* or opening in the colored *iris,* and the *lens.* The lens of the eye bends the light rays as they pass through it, and focuses them on the *retina* or rear inner lining of the eye which contains optic nerve cells. The lens operates much as a camera lens focuses light rays on a film. The retina then relays the light ray image through the *optic nerve* to the brain. Though the image is received upside down because the lens has inverted it, the brain interprets it correctly and the viewer sees the girl right side up.

If a person's eyeball is too long and the image in focus falls in front of the retina, he will be nearsighted. If the eyeball is too short and the image falls behind it, he will be farsighted. If the cornea has an imperfect curvature, he will have astigmatism. Properly prescribed eyeglasses or contact lenses are the only means of correcting these visual faults.

The human eye



VOCABULARY OF TERMS RELATING TO THE EYE*


SCLERA
RETINA
MACULA LUTEA
FOVEA
OPTIC DISK (BLIND SPOT)
OPTIC NERVE
CHOROID
VITREOUS
CANAL OF SCHLEMM
SUSPENSORY LIGAMENTS
AQUEOUS
IRIS
PUPIL
CORNEA
ANTERIOR CHAMBER
CRYSTALLINE LENS
POSTERIOR CHAMBER
CILIARY BODY
CONJUNCTIVA

Cross-section of the eye

Accommodation—The adjustment of the eye for seeing at different distances, accomplished by changing the shape of the crystalline lens through action of the ciliary muscle, thus focusing a clear image on the retina.

Albinism—An hereditary loss of pigment in the iris, skin and hair; usually associated with lowered visual acuity, nystagmus, and photophobia, and often accompanied by refractive errors.

Amblyopia—Dimness of vision without any apparent disease of the eye.

Ambloypia Ex Anopsia—Dimness of vision due to disuse of the eye.

Ametropia—A refractive error in which the eye, when in a state of rest, does not focus the image of an object upon the retina; includes hyperopia, myopia, and astigmatism. (See *Refractive Error.*)

Aniridia—Congenital absence of the iris.

Aniseikonia—A condition in which the ocular image of an object as seen by one eye differs in size or shape from that seen by the other eye.

Anophthalmos—Absence of a true eyeball.

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*This section, "Vocabulary of Terms Relating to the Eye," the diagrams of the eye (also enlarged on pages 83 and 84), and the description, "How We See" are used by special permission of the *National Society for the Prevention of Blindness, Inc.*

Anterior Chamber—Space in the front of the eye, bounded in front by the cornea and behind by the iris; filled with aqueous.

Aphakia—Absence of the lens of the eye.

Aqueous—Clear, watery fluid which fills the anterior and posterior chambers within the front part of the eye.

Asthenopia—Eye fatigue caused by tiring of the internal or external muscles.

Astigmatism—Refractive error which prevents the light rays from coming to a single focus on the retina because of different degrees of refraction in the various meridians of the eye.

Binocular Vision—The ability to use the two eyes simultaneously to focus on the same object and to fuse the two images into a single image which gives a correct interpretation of its solidity and its position in space.

Blepharitis—Inflammation of the margin of the eyelids.

Blindness—In the United States, the legal definition of blindness is: central visual acuity of 20/200 or less in the better eye after correction; or visual acuity of more than 20/200 if there is a field defect in which the widest diameter of the visual field subtends an angle distance no greater than 20 degrees. Some states include up to 30 degrees.

Buphthalmos—Large eyeball in infants, generally due to secondary glaucoma.

C, CC (Cum Correction)—With correction, wearing prescribed lenses.

Canal of Schlemm—A circular canal situated at the juncture of the sclera and cornea through which the aqueous is excreted after it has circulated between the iris and the cornea.

Canthus—The angle at either end of the slit between the eyelids; specified as outer, or temporal, and inner, or nasal.

Cataract—A condition in which the crystalline lens of the eye, or its capsule, or both, become opaque, with consequent loss of visual acuity.

Central Visual Acuity—Ability of the eye to perceive the shape of objects in the direct line of vision.

Chalazion—Inflammatory enlargement of a meibomian gland in the eyelid.

Chorioretinitis—Inflammation of the choroid and retina.

Choroid—The vascular, intermediate coat which furnishes nourishment to the other parts of the eyeball.

Choroiditis—Inflammation of the choroid.

Ciliary Body—Portion of the vascular coat between the iris and the choroid. It consists of ciliary processes and the ciliary muscle. (See *Uvea.*)

Coloboma—Congenital cleft due to the failure of the eye to complete growth in the part affected.

Color Deficiency—Diminished ability to perceive differences in color—usually for red or green, rarely for blue or yellow.

CONCAVE LENS—Lens having the power to diverge parallel rays of light; also known as diverging, reducing, negative, myopic, or minus lens, denoted by the minus sign (—).

CONES AND RODS—Two kinds of cells which form a layer of the retina and act as light-receiving media. Cones are concerned with visual acuity and color discrimination; rods, with motion and vision at low degrees of illumination (night vision).

CONGENITAL—Present at birth.

CONJUNCTIVA—Mucous membrane which lines the eyelids and covers the front part of the eyeball.

CONJUNCTIVITIS—Inflammation of the conjunctiva.

CONTACT OR CORNEAL LENSES—Lenses so constructed that they fit directly on the eyeball; used for the correction of vision in cases having a cone-shaped cornea and for cosmetic reasons. Corneal lenses are also used after cataract (lens) extraction to replace the lens removed from the eye. They provide less distortion and image size difference from the other eye than spectacles would.

CONVERGENCE—The process of directing the visual axes of the two eyes to a near point, with the result that the pupils of the two eyes are closer together. The eyes are turned inward.

CONVEX LENS—Lens having power to converge parallel rays of light and to bring them to a focus; also known as converging, magnifying, hyperopic, or plus lens, denoted by sign +.

CORNEA—Clear, transparent portion of the outer coat of eyeball forming front of aqueous chamber.

CORNEAL GRAFT—Operation to restore vision by replacing a section of opaque cornea with transparent cornea.

CRYSTALLINE LENS—A transparent, colorless body suspended in the front of the eyeball, between the aqueous and the vitreous, the function of which is to bring the rays of light to a focus on the retina.

CYCLITIS—Inflammation of the ciliary body.

CYCLOPLEGIC—A drug that temporarily puts the ciliary muscle at rest and dilates the pupil; often used to ascertain the error of refraction.

CYLINDRICAL LENS—A segment of a cylinder, the refractive power of which varies in different meridians; used in the correction of astigmatism.

DACRYOCYSTITIS—Inflammation of lacrimal sac.

DARK ADAPTATION—The ability of the retina and pupil to adjust to a dim light.

DEPTH PERCEPTION—The ability to perceive the solidity of objects and their relative position in space.

DIOPTER—Unit of measurement of strength or refractive power of lenses.

Diplopia—The seeing of one object as two.

Duction—A stem word used with a prefix to describe the turning or rotation of the eyeball (abduction—turning out, adduction—turning in).

Ectropion—An eversion or turning inside out of the eyelid.

Emmetropia—The refractive condition of the normal eye. Wheni the eye is at rest, the image of distant objects is brought to a focus on the retina

Endophthalmitis—Inflammation of most of the internal tissues of the eye ball.

Entropion—A turning inward of the eyelid.

Enucleation—Complete surgical removal of the eyeball.

Esophoria—A tendency of the eye to turn inward.

Esotropia—A manifest turning inward of the eye (convergent strabismus or crossed eye).

Exophoria—A tendency of the eye to turn outward.

Exophthalmos—Abnormal protrusion of the eyeball.

Exotropia—Abnormal turning outward from the nose of one or both eyes (divergent strabismus).

Extrinsic Muscles—External muscles of the eye which move the eyeball. Each eye has four rectus and two oblique muscles.

Eye Dominance—Tendency of one eye to assume the major function of seeing, being assisted by the less dominant eye.

Eye Grounds—See Fundus.

Field of Vision—The entire area which can be seen without shifting the gaze.

Floaters—Small particles consisting of cells or fibrin which move in the vitreous.

Focus—Point to which rays are converged after passing through a lens; focal distance is the distance rays travel after refraction before focus is reached.

Fornix—A loose fold of the conjunctiva where the part covering the eyeball meets the conjunctiva lining of the eyelid.

Fovea—Small depression in the retina at the back of the eye; the part of the macula adapted for most acute vision.

Fundus—The back of the eye which can be seen with an ophthalmoscope.

Fusion—The power of coordinating the images received by the two eyes into a single image.

Glaucoma—Increased pressure inside the eye; "hardening of the eyeball," caused by accumulation of aqueous fluid in the front portion.

Glioma—Malignant tumor of the retina.

Gonioscope—A magnifying device used in combination with strong illumination and a contact glass for examining the angle of the anterior chamber.

Hemianopsia—Blindness of one-half the field of vision of one or both eyes.

HETEROPHORIA—A constant tendency of the eyes to deviate from the normal position for binocular fixation, counterbalanced by simultaneous fixation forced by muscular effort (prompted by the desire for single binocular vision). Deviation is not usually apparent, in which case it is said to be latent.

HETEROTROPIA—An obvious or manifest deviation of the visual axis of an eye out of alignment with the other eye. Syn. cross-eye; strabismus.

HORDEOLUM—see *Stye*

HYDROPHTHALMUS (congenital glaucoma) — A rare congenital defect in which the eyeball is abnormally large. It is present at birth or develops early in infancy.

HYPEROPIA, HYPERMETROPIA—A refractive error in which, because the eyeball is short or the refractive power of the lens weak, the point of focus for rays of light from distant objects (parallel light rays) is behind the retina; thus accommodation to increase the refractive power of the lens is necessary for distant as well as near vision.

HYPERPHORIA—A tendency of one eye to deviate upward.

HYPERTROPIA—A deviation upward of one of the visual axes.

INJECTION—A term sometimes used to mean congestion of ciliary or conjunctival blood vessels, redness of the eye.

INTERSTITIAL KERATITIS—Affection of the middle layer of the cornea; disease, found chiefly in children and young adults, is usually caused by transmission of syphilis from mother to unborn child.

IRIDOCYCLITIS—Inflammation of the iris and ciliary body.

IRIS—Colored, circular membrane, suspended behind the cornea and immediately in front of the lens. The iris regulates the amount of light entering the eye by changing the size of the pupil.

IRITIS—Inflammation of the iris; the condition is marked by pain, inflammation, discomfort from light, contraction of pupil, discoloration of iris. It may be caused by injury, syphilis, rheumatism, gonorrhea, tuberculosis, etc.

ISHIHARA COLOR PLATES—A test for defects in recognizing colors, based on the ability to trace patterns in a series of multi-colored charts.

JAEGER TEST—A test for near vision; lines of reading matter printed in a series of various sizes of type.

KERATITIS—Inflammation of the cornea; frequently classified as to type of inflammation and layers of cornea affected as "interstitial" keratitis or "phlyctenular" keratitis.

KERATOCONUS—Cone-shaped deformity of the cornea.

KERATOPLASTY—See Corneal Graft.

LACRIMAL GLAND—A gland which secretes tears; it lies in the outer angle of the orbit.

Lacrimal Sac—The dilated upper end of the lacrimal duct.

Lacrimation—Production of tears.

Lagophthalmos—A condition in which the lids cannot be completely closed.

Lens—A refractive medium having one or both surfaces curved.

Light Adaptation—The power of the eye to adjust itself to variations in the amount of light.

Light Perception—(L.P.), ability to distinguish light from dark.

Limbus—Boundary between cornea and sclera.

Macrophthalmos—Abnormally large eyeball, resulting chiefly from infantile glaucoma.

Macula Lutea—The small area of the retina that surrounds the fovea and with the fovea comprises the area of distinct vision. Syn. yellow spot.

Megalophthalmos—Abnormally large eyeball present at birth (congenital).

Microscopic Glasses—Magnifying lenses arranged on the principle of a microscope, occasionally prescribed for persons with very poor vision.

Miotic—A drug that causes the pupil to contract.

Mydriatic—A drug that dilates the pupil.

Myopia—Nearsightedness. A refractive error in which, because the eyeball is too long in relation to its focusing power, the point of focus for rays of light from distant objects (parallel light rays) is in front of the retina. Thus, to obtain distinct vision, the object must be brought nearer to take advantage of divergent light rays (those from objects less than twenty feet away).

Near Point of Accommodation—The nearest point at which the eye can perceive an object distinctly. It varies according to the power of accommodation.

Near Point of Convergence—The nearest single point at which the two eyes can direct their visual lines, normally about three inches from the eyes in young people.

Near Vision—The ability to perceive objects distinctly at normal reading distance, or about fourteen inches from the eyes.

Night Blindness—A condition in which the sight is good by day but deficient at night and in faint light.

Nystagmus—An involuntary, rapid movement of the eyeball; it may be lateral, vertical, rotary, or mixed.

Oculist or Ophthalmologist—A physician—an M.D.—who specializes in diagnosis and treatment of defects and diseases of the eye, performing surgery when necessary or prescribing other types of treatment, including glasses.

Oculus Dexter (O.D.)—Right eye.

Oculus Sinister (O.S.)—Left eye.

OCULUS UTERQUE (Q.U.)—Both eyes.

OPHTHALMIA—Inflammation of the eye or of the conjunctiva.

OPHTHALMIA NEONATORUM—An acute, purulent conjunctivitis in the newborn; (for control purposes, it is sometimes legally defined as "an inflamed or discharging eye in a newborn baby under two weeks").

OPHTHALMOLOGIST OR OCULIST—See Oculist.

OPHTHALMOSCOPE—An instrument used in examining the interior of the eye.

OPTIC ATROPHY—Degeneration of the nerve tissue which carries messages from the retina to the brain.

OPTIC CHIASM—The crossing of the fibers of the optic nerves on the lower surface of the brain.

OPTIC DISK—Head of the optic nerve in the eyeball.

OPTICIAN—One who grinds lenses, fits them into frames, and adjusts the frames to the wearer.

OPTIC NERVE—The special nerve of the sense of sight which carries messages from the retina to the brain.

OPTIC NEURITIS—Inflammation of the optic nerve.

OPTOMETRIST—A licensed, nonmedical practitioner, measures refractive errors—that is, irregularities in the size or shape of the eyeball or surface of the cornea—and eye muscle disturbances. In his treatment the optometrist uses glasses, prisms, and exercises only.

ORTHOPTIC TRAINING—Series of scientifically planned exercises for developing or restoring the normal teamwork of the eyes.

PALPEBRAL—Pertaining to the eyelid.

PANNUS—Invasion of the cornea by infiltration of lymph and formation of new blood vessels.

PARTIALLY SEEING CHILD—For educational purposes, a partially seeing child is one who has a visual acuity of 20/70 or less in the better eye after the best possible correction, and who can use vision as his chief channel of learning.

PERIMETER—An instrument for measuring the field of vision.

PERIPHERAL VISION—Ability to perceive the presence, motion, or color of objects outside of the direct line of vision.

PHLYCTENULAR KERATITIS—A variety of Keratitis characterized by the formation of pustules or papules on the cornea; usually occurs in young children and may be caused by poor nutrition. Many physicians believe it to be a tubercular condition.

PHORIA—A root word denoting a latent deviation in which the eyes have a constant tendency to turn from the normal position for binocular vision; used with a prefix to indicate the direction of such deviation (hyperphoria, esophoria, exophoria).

PHOTOPHOBIA—Abnormal sensitivity to and discomfort from light.

PLEOPTICS—A method of treating amblyopia through the use of instruments which restore fixation to the fovea by direct stimulation or by the production and correct localization of after-images.

POSTERIOR CHAMBER—Space between the back of the iris and the front of the lens; filled with aqueous.

PRESBYOPIA—A gradual lessening of the power of accommodation due to a physiological change which becomes noticeable after the age of forty.

PROSTHESIS—An artificial substitute for a missing eye (or other missing part of the body).

PSEUDOISOCHROMATIC CHARTS—Charts with colored dots of various hues and shades indicating numbers, letters or patterns, used for testing color discrimination.

PTOSIS—A paralytic drooping of the upper eyelid.

REFRACTION—1. Deviation in the course of rays of light in passing from one transparent medium into another of different density.

2. Determination of refractive errors of the eye and correction by glasses.

REFRACTIVE ERROR—A defect in the eye that prevents light rays from being brought to a single focus exactly on the retina.

REFRACTIVE MEDIA—The transparent parts of the eye having refractive power; cornea, aqueous, lens, and vitreous.

RETINA—Innermost coat of the eye, formed of sensitive nerve fibers and connected with the optic nerve.

RETINAL DETACHMENT—A separation of the retina from the choroid.

RETINITIS—Inflammation of the retina.

RETINITIS PIGMENTOSA—An hereditary degeneration and atrophy of the retina. There is usually misplaced pigment.

RETINOBLASTOMA—The most common malignant intraocular tumor of childhood occurs usually under age 5. It is probably always congenital. (Formerly known as glioma.)

RETINOPATHY—A disease of the retina, due to various causes.

RETINOSCOPE—An instrument for determining the refractive state of the eye by observing the movements of lights and shadows across the pupil by the light thrown onto the retina from a moving mirror.

RETROLENTAL FIBROPLASIA—A disease of the retina in which a mass of scar tissue forms in back of the lens of the eye. Both eyes are affected in most cases and it occurs chiefly in infants born prematurely who receive excessive oxygen.

RODS AND CONES—See Cones and Rods.

S. SC (SINE CORRECTION)—Without correction; that is, not wearing glasses.

Safety Glasses—Impact resistant; available with or without visual correction for workshop or street wear protection, for both adults and children.

Sclera—The white part of the eye—a tough covering which, with the cornea, forms the external, protective coat of the eye.

Scleritis—Inflammation of the sclera.

Scotoma—A blind or partially blind area in the visual field.

Slit Lamp—Provides a narrow beam of strong light; often used with a corneal microscope for examination of the front portions of the eye.

Snellen Chart—Used for testing central visual acuity. It consists of lines of letters, numbers or symbols in graded sizes drawn to Snellen measurements. Each size is labeled with the distance at which it can be read by the normal eye. Most often used for testing vision at distance of 20 feet.

Spherical Lens—Segment of a sphere refracting rays of light equally in all meridians.

Stereoscopic Vision—Ability to perceive relative position of objects in space without such cues as shadow, size and overlapping.

Strabismus—Squint; failure of the two eyes simulataneously to direct their gaze at the same object because of muscle imbalance.

Stye—Acute inflammation of a sebaceous gland in the margin of the eyelid, due to infection and usually resulting in the formation of pus.

Sympathetic Ophthalmitis—Inflammation of one eye due to an infection in the other eye.

Synechia—Adhesion, usually of the iris to cornea or lens.

Tangent Screen—A large black or gray curtain supported by a framework on which the normal central field and blind spot have been lightly outlined. This instrument is used for measuring the central field of vision.

Tarsus—The framework of connective tissue which gives shape to the eyelid.

Telescopic Glasses—Magnifying spectacles founded on the principles of a telescope; occasionally prescribed for improving very poor vision which cannot be helped by ordinary glasses.

Tension, Intraocular—The pressure or tension of the contents of the eyeball.

Tonometer—An instrument for measuring pressure inside the eye.

Trachoma—A form of infectious kerato-conjunctivitis caused by a specific virus which in the chronic form produces severe scarring of the eyelids and cornea.

Tropia—A root word denoting an obvious deviation from normal of the axis of the eyes (strabismus) used with a prefix to denote the type of strabismus, as heterotropia, esotropia, exotropia.

Tunnel Vision (Gun-Barrel, Tubular)—Contraction of the visual field to such an extent that only a small area of central visual acuity remains, thus giving the affected individual the impression of looking through a tunnel.

UVEAL TRACT—Entire vascular coat of the eyeball. It consists of the iris, ciliary body, and choroid.

UVEITIS—Inflammation of the uveal tract of the eye.

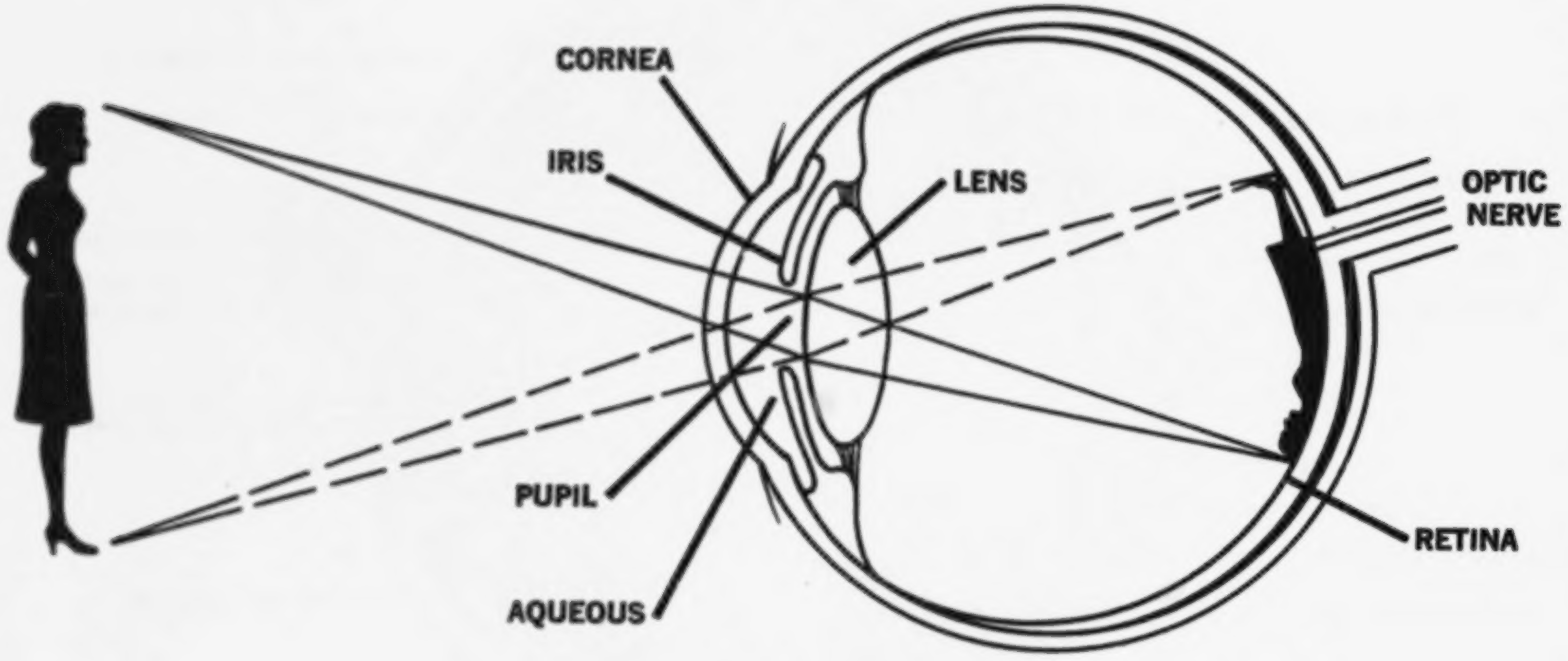
VISION—The art or faculty of seeing; sight.

VISUAL ACUITY—See Central Visual Acuity.

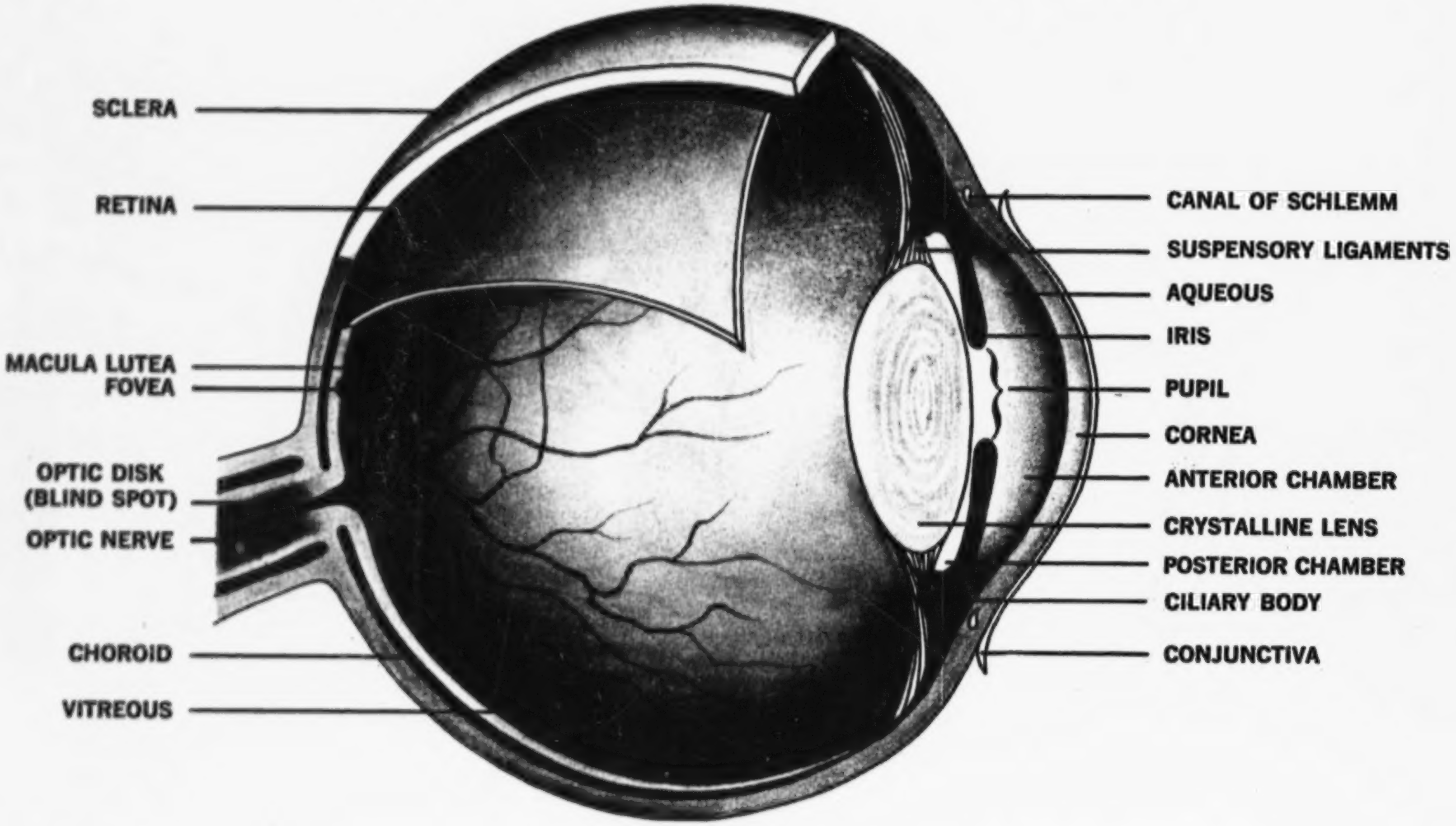
VISUAL PURPLE—The pigment in the outer layers of the retina.

VITREOUS—Transparent, colorless mass of soft, gelatinous material filling the eyeball behind the lens.

VITREOUS OPACITIES—See Floaters.


CORNEA
IRIS
LENS
OPTIC NERVE
PUPIL
AQUEOUS
RETINA

The human eye


SCLERA
RETINA
MACULA LUTEA
FOVEA
OPTIC DISK (BLIND SPOT)
OPTIC NERVE
CHOROID
VITREOUS
CANAL OF SCHLEMM
SUSPENSORY LIGAMENTS
AQUEOUS
IRIS
PUPIL
CORNEA
ANTERIOR CHAMBER
CRYSTALLINE LENS
POSTERIOR CHAMBER
CILIARY BODY
CONJUNCTIVA

Cross-section of the eye

Appendix

ANSWERS TO QUESTIONS FREQUENTLY ASKED ABOUT THE PROGRAM FOR EDUCATING VISUALLY HANDICAPPED CHILDREN.

1. *What Services Are Available for Visually Handicapped Children?*

   The public schools of the City of New York maintain classes for visually limited as well as for blind children. Itinerant teaching service is provided for visually handicapped pupils who cannot be placed in these classes.

2. *Why Do We Have Programs for Visually Limited Children?*

   Such programs are organized to prevent the failure and promote the progress of children who, because of poor eyesight, cannot keep up with the work in the regular grades. Many children cannot read the fine print in the school textbooks and/or cannot see the blackboard unless given special attention.

   Lighting is made suitable. Desks are adjustable. Large print books are supplied. Audio aids are provided. Typewriters with enlarged type are also part of the resource room's equipment.

3. *Why Do We Have Classes for the Blind?*

   Braille books, braillewriters, braille slates, and other equipment are essential to meet the reading and writing needs of children who are blind and require instruction through tactual methods.

4. *Do Children Make Regular Progress in Programs for Visually Limited Children and for the Blind?*

   Pupils in these programs cover the same curriculum as the non-handicapped pupils and at the end of each year progress to the next grade in the same manner as their normally-sighted classmates.

5. *Who Has Charge of Programs for Visually Limited and Blind Children?*

   Such programs are conducted by teachers who have had professional training in teaching children who are partially sighted or blind and who hold a license to teach such classes.

6. *What Do These Teachers Do for the Visually Handicapped Child?*

   To enable the child to keep up with the work of his grade and to associate on an equal footing with children of his own age, these teachers provide him with remedial teaching; tutorial assistance; special materials and equipment as needed; and guidance in health, social, vocational, and educational problems.

7. *How Are Children Admitted to Programs for Visually Handicapped Children?*

   Recommendation for placement in a program for visually limited children or for the blind is made by a consultant ophthalmologist of the Department of Health of the City of New York which furnishes a printed form (E12S) for this purpose. The Bureau for the Education of the Visually Handicapped authorizes all admissions.

8. *What Are the Criteria for Admission?*

   a. Classes for Visually Limited Children.
      For admission to these programs children must have normal mentality and visual acuity (after correction) of 20/70 or less vision in both eyes.

   b. Classes for the Blind.
      Children are placed in programs for the blind when they are unable to function with printed material. They must also have normal mentality, mobility, and adequate self-help skills.

9. *Does a Child Always Remain in a Program for Visually Limited Children or for the Blind Once He Is Admitted?*

   When special facilities and services are no longer needed because of vision, a discharge from these programs is recommended by the consultant ophthalmologist of the Department of Health.
   The Bureau for the Education of the Visually Handicapped authorizes all discharges.

10. *Where Are These Programs Located?*

    They are distributed over the entire city, in all boroughs, and in primary, intermediate, and secondary schools.

11. *How Do Children Reach These Classes?*

    School bus transportation is provided, in accordance with the rules of the Bureau of Pupil Transportation, for elementary and intermediate school pupils registered in classes for visually limited children. For pupils registered in classes for the blind, transportation is provided on all school levels. For mature and capable students travel on common carrier is encouraged if the parent consents.

12. *What Signs of Visual Difficulty Observed by Teachers Should Be Referred to the School Nurse?*

    a. difficulty in seeing chalkboard work
    b. squinting
    c. inflammation of eyes or lids
    d. excessive rubbing of eyes
    e. holding reading material too close or too far away
    f. frequent headaches
    g. covering an eye
    h. strabismus (involuntary convergence or divergence of one or both eyes).

13. *How Does the Resource Teacher Enlist the Aid of Outside Agencies?*

    The term "Outside Agencies" should be subdivided into at least two general classifications—those serving visually handicapped pupils and those other agencies meeting the needs of all students. The referrals are processed through the Bureau for the Education of the Visually Handicapped when the teacher requests help from agencies working with blind and partially sighted pupils. When seeking help from the other agencies, the teacher will find that the school counselor, the school nurse, or other school administrators may be helpful.

14. *What Are the Responsibilities of Schools Participating in the Itinerant Teaching Program?*

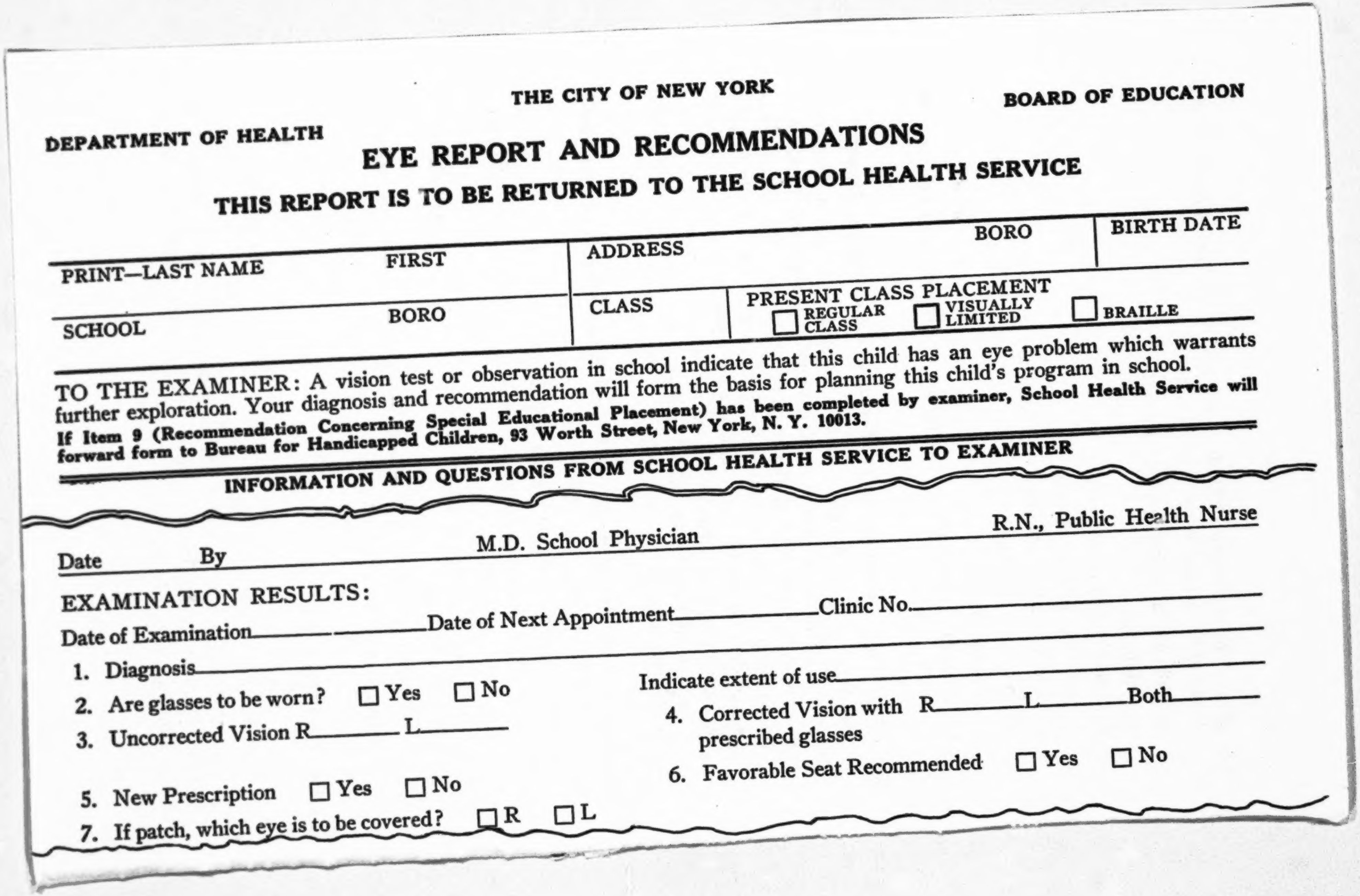
    The responsibilities of such schools include the following:

    a. Referral of visually handicapped pupils to the Bureau or to the Department of Health.
    b. Provision for consultations between members of the faculty and the itinerant teacher.
    c. Allocation of suitable teaching and storage space within the school.
    d. Provision of suitable books for instruction and reference.

EYE REPORT FORM

The "Eye Report and Recommendations" form (E-12S) is shown on the following pages 87 through 91.

The need and use of the form, the individuals who record, interpret, and make recommendations based upon information given on the form, will be found on pages 16, 17, and 19.



THE CITY OF NEW YORK

DEPARTMENT OF HEALTH | BOARD OF EDUCATION

EYE REPORT AND RECOMMENDATIONS

THIS REPORT IS TO BE RETURNED TO THE SCHOOL HEALTH SERVICE

PRINT—LAST NAME	FIRST	ADDRESS	BORO	BIRTH DATE
SCHOOL	BORO	CLASS	PRESENT CLASS PLACEMENT ☐ REGULAR CLASS ☐ VISUALLY LIMITED ☐ BRAILLE	

TO THE EXAMINER: A vision test or observation in school indicate that this child has an eye problem which warrants further exploration. Your diagnosis and recommendation will form the basis for planning this child's program in school. **If Item 9 (Recommendation Concerning Special Educational Placement) has been completed by examiner, School Health Service will forward form to Bureau for Handicapped Children, 93 Worth Street, New York, N. Y. 10013.**

INFORMATION AND QUESTIONS FROM SCHOOL HEALTH SERVICE TO EXAMINER

Date ______ By ______ M.D. School Physician ______ R.N., Public Health Nurse

EXAMINATION RESULTS:

Date of Examination ______ Date of Next Appointment ______ Clinic No. ______

1. Diagnosis ______
2. Are glasses to be worn? ☐ Yes ☐ No — Indicate extent of use ______
3. Uncorrected Vision R ______ L ______
4. Corrected Vision with prescribed glasses R ______ L ______ Both ______
5. New Prescription ☐ Yes ☐ No
6. Favorable Seat Recommended ☐ Yes ☐ No
7. If patch, which eye is to be covered? ☐ R ☐ L

8. Remarks:

For Criteria regarding special class placement available for children with severe visual handicaps see reverse side of this form.

9. Recommendation Concerning Special Educational Placement:
☐ Visually Limited Program
☐ Braille Program
☐ Special Placement is no longer needed for eye condition.

If checked, the following additional information is required:— *(See Type Sample Over)*

10. ☐ Bus Transportation *(Regular Class)*. Duration________

Actual Prescription Given and Corrected vision.

				Far	Near
R: Spher____	Cyl____	Axis____	VOD____	Type Read O.D.____	
L: Spher____	Cyl____	Axis____	VOS____	Type Read O.S.____	

Is any ocular pathology present? ☐ Yes ☐ No If yes, describe________

NAME OF EXAMINER AND PROFESSIONAL DEGREE *(Please Print)* ADDRESS TELEPHONE

FOR DEPARTMENT OF HEALTH USE ONLY

APPROVED FOR: ☐ VISUALLY LIMITED PROGRAM ☐ BRAILLE PROGRAM ☐ REGULAR CLASS

________ DATE ________ M.D. CONSULTANT OPHTHALMOLOGIST

E-12S (Rev. 8/63)—400M-804029(64) 114

VISUALLY HANDICAPPED PROGRAM — EDUCATIONAL FACILITIES

The Board of Education maintains resource classrooms for children (of normal intelligence and mobility) with severe visual handicaps. These classes are designed to help the pupil compensate for his difficulty. Specially trained teachers are assigned so that the child may carry on his regular school work to the greatest extent possible. Promotion and graduation are on the same basis as for other children in the school. The pupil is not isolated; most of his classroom work is carried on with the regular classes. In the resource rooms, special materials are provided and certain individual lessons are conducted. Experience has shown that children in the classifications outlined below may derive benefit from placement in these classes and that their school work and general morale may be improved.

For children who do not meet the above criteria itinerant teaching services are made available; and for those children who are multiply handicapped and blind, special classes exist.

CRITERIA FOR SPECIAL EDUCATIONAL PLACEMENT

(Subject to the approval of Department of Health which reserves the right to examine the child)

1. RESOURCE CLASS FOR VISUALLY LIMITED

Poor vision after correction—20/70 or less vision in better eye and any child who in the opinion of the examiner would benefit visually by a resource class placement.

THESE TYPE SAMPLES ARE COMMONLY ENCOUNTERED IN INSTRUCTIONAL MATERIALS FOR VISUALLY LIMITED CLASSES. TEST NEAR VISION USING THE FOLLOWING TEST TYPES AT ANY NEAR DISTANCE.

24 **16**

2. BRAILLE RESOURCE CLASS

Available to children whose vision after correction is poor enough to warrant Braille instruction.

3. REMOVAL FROM SPECIAL CLASS PLACEMENT

Visual function does not require special educational services.

Other Information of Value in Educational Placement

(Please include any observations or information which may assist in proper placement of child.)

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Periodicals

Sight Saving Review. National Society for the Prevention of Blindness.

Exceptional Children. Council for Exceptional Children.

International Journal for the Education of the Blind. American Association of Instructors for the Blind.

The New Outlook for the Blind. American Foundation for the Blind.

AGENCIES

Publications of the following agencies have been found useful for the teacher of visually handicapped children.

American Association of Instructors for the Blind
2363 South Spring Avenue, St. Louis, Missouri 63110

American Association of Workers for the Blind
1511 K Street, N.W., Washington, D.C.

American Foundation for the Blind
15 West 16 Street, New York, N.Y. 10011

Council for Exceptional Children
1201 16th Street, N.W., Washington, D.C. 20036
(Council for the Education of the Partially Seeing is a division of the Council)

Industrial Home for the Blind
57 Willoughby Street, Brooklyn, N.Y. 11201

Jewish Guild for the Blind
1880 Broadway, New York, N.Y. 10023

Library of Congress, Division for the Blind
Washington, D.C. 20540

National Society for the Prevention of Blindness
16 East 40 Street, New York, N.Y. 10016

New York Association for the Blind (The Lighthouse)
111 East 59 Street, New York, N.Y. 10022

New York State Commission for the Blind
15 Park Row, New York, N.Y. 10038

New York State Department of Education, Bureau of Handicapped Children
Albany, N.Y. 12201

United States Department of Health, Education, and Welfare
Washington, D.C. 20202
1) Children's Bureau, 2) Education of Exceptional Children, Office of Education Branch

SOURCES OF MATERIAL

Following is a list of organizations which supply catalogs of various materials available for classes of the visually handicapped:

American Foundation for the Blind
15 West 16 Street, New York, N.Y. 10010
1) *Aids and Appliances*, 2) *Publications*, 3) *Talking Book Topics*

American Printing House for the Blind
1839 Frankfort Avenue, Louisville, Kentucky
1) *Large Type Textbooks*, 2) *Braille Publications*, 3) *Talking Books*,
4) *Tangible Apparatus*, 5) *Recorded Educational Aids to Learning*,
6) *Vacuum-Formed Plastic-Plate Braille*, 7) *Music Publications*

Board of Education of the City of New York
110 Livingston Street, Brooklyn, N.Y. 11201
1) *Textbook List*, 2) *"G-1" List: General Supplies, Vocational Supplies*

Cloverbook Printing House for the Blind
Cincinnati, Ohio 45231
Booklists for Young Readers

Franklin Watts, Inc., Publications
575 Lexington Avenue, New York, N.Y. 10022
Keith Jennison Books in Large Type Editions

Industrial Home for the Blind (Administrative Office)
57 Willoughby Street, Brooklyn, N.Y. 11201

Industrial Home for the Blind, Nassau-Suffolk Braille Library
329 Hempstead Turnpike, West Hempstead, Long Island, N.Y.
Braille, Large Print and Recorded Textbooks and Supplementary Reading

Jewish Guild for the Blind
1880 Broadway, New York, N.Y. 10023
Braille Books

Library of Congress, Division for the Blind
Washington, D.C. 20540
Braille Books

Library for the Blind
166 Avenue of the Americas, New York, N.Y. 10013
1) *Braille Books*, 2) *Talking Books*, 3) *Tapes*

National Aid to Visually Handicapped
3201 Balboa Street, San Francisco, California
(New York Chapter: 175 Fifth Avenue, New York, N.Y. 10003)
Large Type Materials

National Society for Prevention of Blindness
16 East 40 Street, New York, N.Y. 10016
Catalog

Recording for the Blind
121 East 58 Street, New York, N.Y. 10022
Recorded Books

Stanwix House
Pittsburgh, Pennsylvania
Large Type Edition Publications

Note: Books required in large type that are not available in any of the known sources may be enlarged commercially by photography and xerography upon permission of the publisher. If a book required for a visually handicapped pupil is not listed in any of the known sources, information as to whether such a book is available and where, can be obtained by writing to:

Textbook Consultant, American Printing House for the Blind
1839 Frankfort Avenue, Louisville, Kentucky.